JANUARY
1954

fueloil & oil heat

Annual
Oilheating
Analysis

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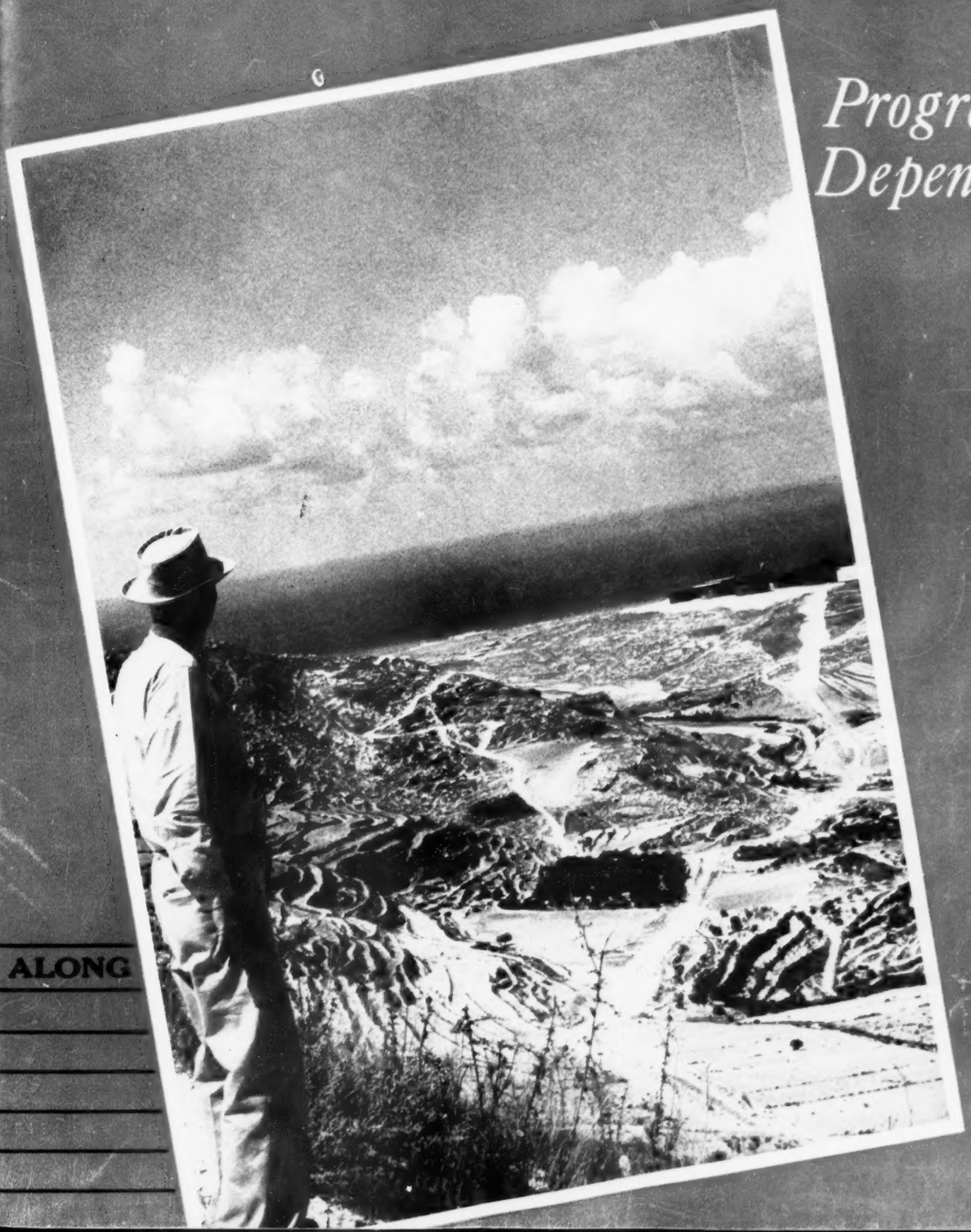
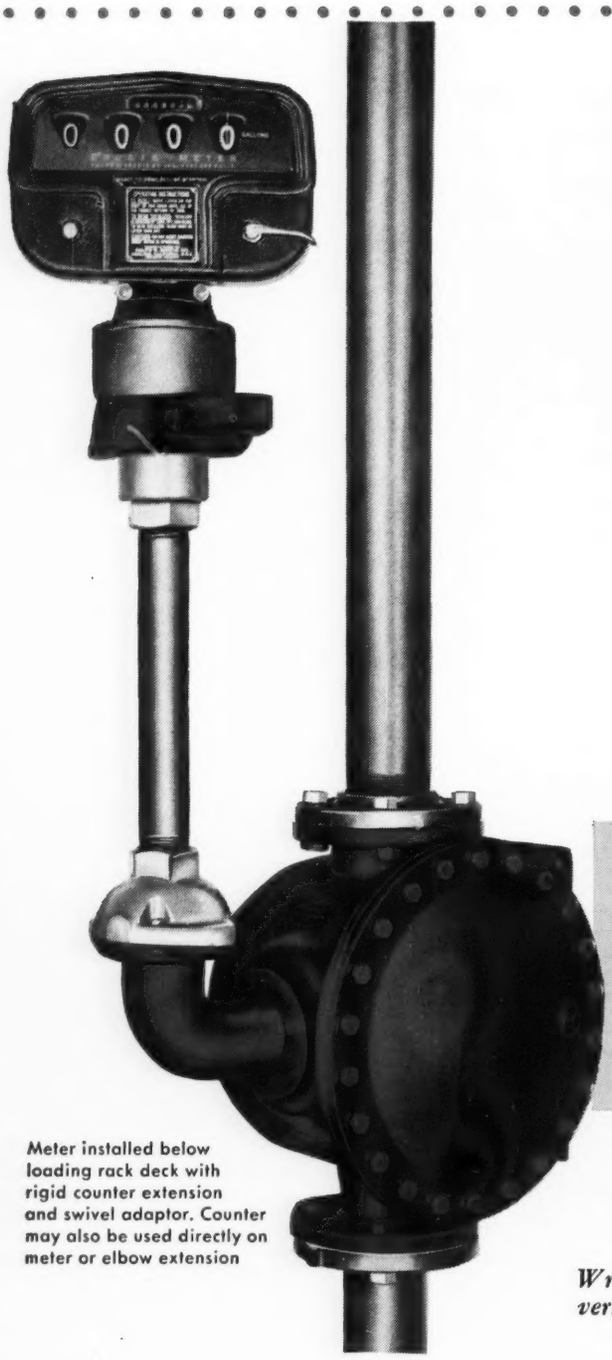
Progressive
Dependable



S ALONG

ON VERTICAL OR HORIZONTAL LINES



Meter installed below loading rack deck with rigid counter extension and swivel adaptor. Counter may also be used directly on meter or elbow extension

BRODIE *BIROTOR* METERS ARE READILY ADAPTABLE TO ALL PIPING NEEDS

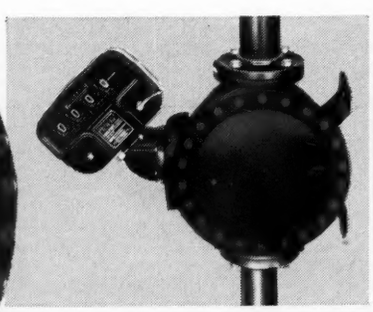
Meter operates with equal efficiency and accuracy in any position

Counter can be mounted for easy readibility regardless of meter location

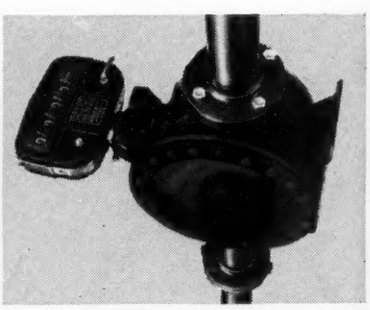
Double case construction permits meter to be supported by vertical line, or may be bolted to wall or girder

Versatility of application allows Brodie BiRotors to be used in a widest range of installations

- **45° angle counter adaptors**
- **360° swivel counter adaptors**
- **Elbow counter adaptors**
- **Counter extensions**



45° angle counter adaptor provides compact, economical vertical line installation for easy counter reading.



Standard meter may be installed in vertical line below eye level, with counter mounted for maximum visibility.

Write today for more complete details on Brodie Meters for vertical or horizontal line installations. Request Bulletin No. 635.

BRODIE ALL-STEEL BiRotor TRUE-ROTARY METERS

RALPH N. BRODIE CO., INC. • **ALVARADO & WEST 137th AVE., SAN LEANDRO, CALIFORNIA, U.S.A.**

MT. VERNON, N. Y.	CHICAGO 5, ILL.	DALLAS, TEXAS	SEATTLE 9, WASH.	LOS ANGELES 22, CALIF.
550 So. Columbus Ave.	59 E. Van Buren	167 Parkhouse St.	221 9th Ave. N.	5401 E. Sheila Street

REPRESENTATIVES WITH STOCKS AND SERVICE FACILITIES IN ALL PRINCIPAL CITIES

E. Evgin
Wahs

Now! SUNDSTRAND Fuel Units for every heating need...

HIGH-PRESSURE

Model "J"—Designed for better, quieter performance and simplified field service, the Model "J" *Single-Stage* unit features these engineering advances: (1) small and compact; (2) precision-made, hydraulically equalized pumping members; (3) positive-seating strainer; (4) leakproof seal; (5) long shaft bearing; (6) balanced, positive-acting valve; (7) interchangeable parts and mounting. Model "J" is available in 5 nozzle capacities . . . 3, 6, 10, 14 and 20 gph.

Model "H"—This model is a self-purging, compact, easily serviced *Two-Stage* fuel unit with the same simplified porting as the Model "J" . . . designed for use on two-pipe systems having vacuum requirements up to 20". The Model "H" has proved itself an outstanding unit for long line, high lift oil burner installations. It incorporates the same fine features as the Model "J". The "H" is available for 3, 6, 10, 14 and 20 gph firing rates.

LOW-PRESSURE

AIR-OIL—Ideal for today's compact modern housing, this new air-oil model gives you a unit that will handle the entire firing range (.4 to 1.5 gph) with one large-orifice nozzle . . . plus unusually clean starts and stops. These advantages, in addition to easy installation and service, are brought to you in a unit which measures only 7" long by 3" in diameter and weighs just 7 pounds. It has air, lift and metering pumps, cutoff valve and strainer all designed for years of trouble-free service.

NOTE: Burners must be designed specifically to use this fuel unit. Except on manufacturers' recommendations, the unit should not be installed in the field for conversion of high-pressure to low-pressure type systems.

SUNDSTRAND MACHINE TOOL CO.
Hydraulic Division, Rockford, Illinois
Made in Canada by John Inglis Co., Ltd.
14 Strachan Ave., Toronto

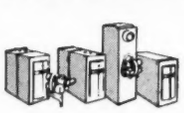
SUNDSTRAND

A name to remember in **FUEL UNITS**

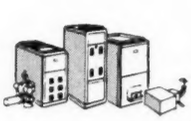
They ALL come to see the man with all THREE —the EUREKA *Williams* dealer!

THREE FULL LINES of home comfort products put you way ahead. For one thing, you don't miss a sale—you can and do meet *every* customer's product preference. Another thing—there are no seasonal slumps when you're a Eureka Williams dealer. With OIL-O-MATIC and GAS-O-MATIC Heating *plus* AIR-O-MATIC Cooling it's "open season" for sales the *whole year 'round.*

If you're a progressive dealer with an eye to the future, try this combination. *One* famous name, based on thirty years of leadership—backed by *three* full lines—and boosted by *four-season* selling! Better write today for the profit-facts of the Eureka Williams Franchise.



OIL-O-MATIC Home Heating—with exclusive *Metered Low Pressure.* Complete line for homes of all sizes—for all types of heating.



GAS-O-MATIC Home Heating—with exclusive *Metered Flow Pressure.* Models for homes of every size, large and small.

AIR-O-MATIC Home Cooling—latest member of the famed Williams family. Installed with Oil-O-Matic, Gas-O-Matic or existing forced warm-air heating system to provide *year 'round* air conditioning at very low cost.

EW PRODUCTS

WILLIAMS DIVISION

Eureka Williams Corporation • Bloomington, Illinois

In Canada—Williams Oil-O-Matic of Canada, Ltd., Guelph, Ontario

Better Products, Better Made... *for better living!*

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JANUARY fueloil & oilheat 1954

VOLUME 13 NUMBER 1

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Among other things . . .

The cover picture shows oil in the desert . . . it's the Sidon terminus of the Trans-Arabian pipeline on the Mediterranean. This brings to mind one of the important reasons why all petroleum products are so plentiful today. The Middle East output is enormous and growing. It has taken over most of our export trade, so we have lots more oil at home to happily serve more families with oilheating.

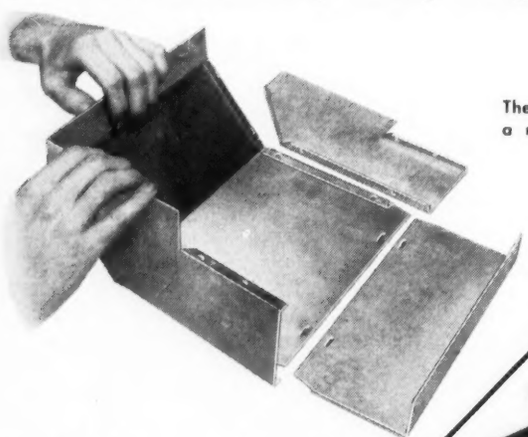
This issue is our annual statistical job to bring the industry up-to-date on itself. The four main-line features survey all of us from as many points of the compass. You won't be able to absorb all of the measurements in a casual reading.

Keep the issue, as most dealers do, and refer to it a number of times during 1954 as you run into figure problems of your own and want to see how others stack up.

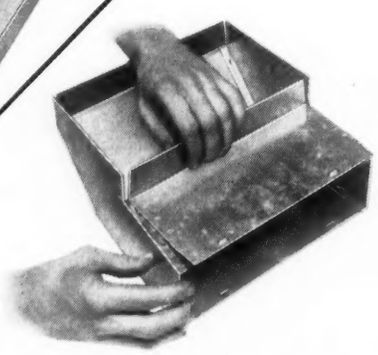
SAVE TIME SAVE SPACE SAVE WASTE

with **DUC-PAC**

New Revolutionary Snap-Together Fittings



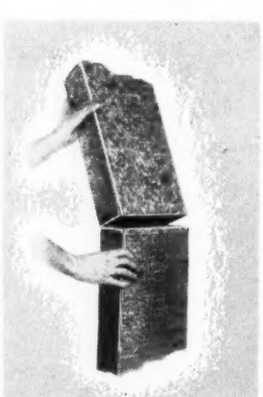
They snap together in a matter of seconds.



Here at last is a line of knocked-down duct fittings designed specifically to fill YOUR needs. DUC-PAC'S exclusive internal snap lock eliminates any "folding over" operation . . . improves appearance of finished job.

THEY SAVE YOU TIME

You can assemble DUC-PAC galvanized fittings in seconds. Simplified system saves time in laying out a job. Practical design of fitting saves time in installing. They just *snap* together . . . no hammer necessary.



THEY SAVE YOU SPACE

DUC-PAC galvanized fittings are shipped knocked-down, packaged 12 to a carton, require only about 10% of space needed to store old-style fittings. They save space in your truck, too.

THEY SAVE YOU WASTE

Because they're knocked-down and packed in cartons, DUC-PAC galvanized fittings don't become dented or battered in storage or in the truck. Eliminating waste keeps your costs down.

Request free descriptive bulletin showing complete line.

DUC-PAC

DUC-PAC "THEY ALL GO TOGETHER"

DIVISION of SWETT BROS. 78 ISLAND POND RD., SPRINGFIELD • MASS.

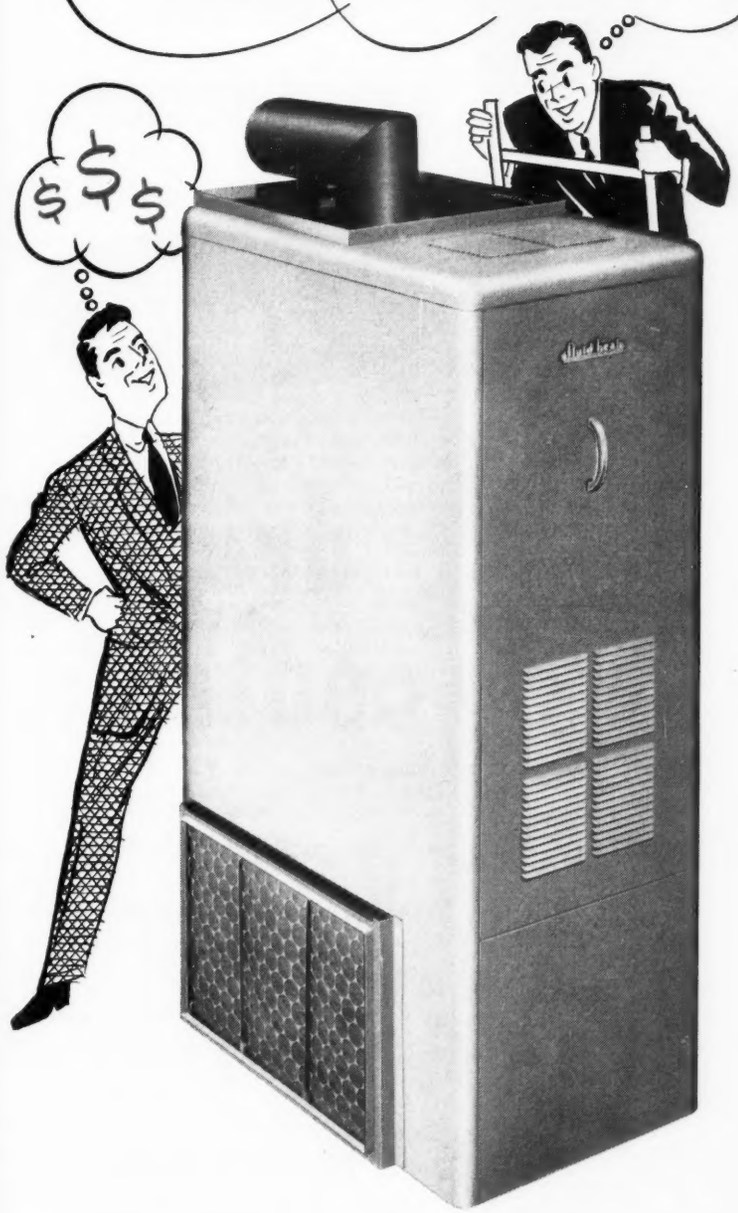
Names in the News

David T. Morgenthaler has been elected vice-president and director of sales for the Delavan Manufacturing Co., West Des Moines, Iowa. He joined the firm in 1950 as sales manager. At the same time Delavan announced that *Patrick McKeown*, formerly with Solar Aircraft of Des Moines, would become production control manager.

John E. Haines, vice-president of the Minneapolis-Honeywell Regulator Co., Minneapolis, Minn., has been appointed to the Building Research Advisory Board, a division of the National Academy of Sciences. Since its formation in 1949 the Building Research Advisory Board has worked with architects and hospital authorities, has conferred with the U. S. Chamber of Commerce architects, U. S. Office of Education, and the Atomic Energy Commission.

Charles H. Bunch, 61, chairman of the board and treasurer of Acme Electric Corp., Cuba, N. Y., died December 11 in Los Angeles, Calif. He started his career in Cleveland with Electric Products Co. and in 1917 became one of the founders of Acme Electric. The company operated in Cleveland until 1937 when it moved to Cuba, N. Y. He was a member of the American Institute of Electrical Engineers, the Illuminating Engineering Society and other professional and engineering organizations. For the last year he had spent much time at his Beverly Hills home where he was active in establishing the Acme Electric

This NEW fluid heat is a "natural" sales blazer...



HERE IT IS, the newest addition to the famous Fluid Heat line, the SU-75 . . . another "natural" sales blazer . . . another profit maker. Three features make this new SU-75 a "natural" for new homes or for modernizing many existing heating systems.

FIRST is its design. Now, with the SU-75, installation is easier and less costly in any location. Design permits flue to be mounted in 8 positions. Filters can be mounted on bottom or either side. Units are accepted for "Zero Clearance." Two unit capacities are available . . . 75,000 and 100,000 BTUs/hr. All in all, the SU-75 makes for unlimited location flexibility. Shipped completely assembled and wired. Every home owner and builder is your likely prospect.

SECOND is Fluid Heat's beauty. Eye-catching, colorful appearance . . . all round corner construction . . . unit compactness . . . here are real selling points for you in contacting builders, because, in turn, these points are selling points for them. Make customers out of home owners and home builders, alike.

THIRD is economy. Fluid Heat's exclusive "Dua-Flo" Combustion Chamber is the latest and most advanced in design. Flame direction up and down, plus all around heat absorption surface means that Fluid Heat can offer the utmost in economy . . . the most heat from every bit of fuel. You know what a sales-clincher that is with today's cost-minded buyers.

The phenomenal growth in popularity among American home owners demands that we make the FLUID HEAT line available thru additional dealers who are established in their sales area.

Like all FLUID HEAT dealers, you will be supported by powerful, hard-selling advertising in the nation's most-read-by-homeowners magazines: *Saturday Evening Post* and *Better Homes and Gardens.*

Let us give you full details and discuss the advantages you would obtain in your area as an authorized FLUID HEAT dealer.

fluid heat
AUTOMATIC HEATING EQUIPMENT
"WORLD'S ECONOMY CHAMPION"
Division of ANCHOR POST PRODUCTS, INC.
6700 Eastern Avenue, Baltimore 24, Maryland
also Colbaugh Street, Red Oak, Iowa

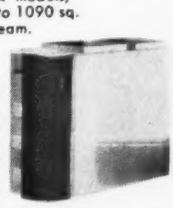
A FLUID HEAT UNIT FOR EVERY HEATING PROBLEM

Famous Fluid Heat Pressure Burners. Four models, with firing rates from 7/10 to 12 gallons per hour.

Famous Fluid Heat Wall Flame Rotary Burner. Two models with firing rates from 7/10 to 4½ gallons per hour.

OIL-FIRED UNITS

Famous Fluid Heat Boiler Burner Units. Six models, rated from 300 to 1090 sq. ft. of standing steam.



Famous Fluid Heat Warm Air Furnaces. Seven models, from 75,000 to 335,000 B.T.U. per hour.

GAS-FIRED UNITS

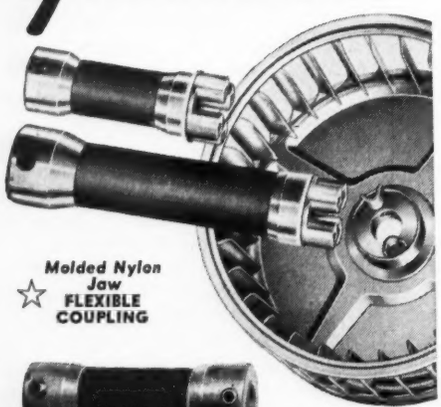
New Fluid Heat Gas-Fired Warm Air Furnaces with rated inputs of 70,000 to 140,000 B.T.U. per hour.

Single-port, self-piloting Fluid Heat Gas Conversion Burners. Rated inputs of 75,000 to 300,000 B.T.U. per hour.

LET QUALITY BE YOUR GUIDE . . .

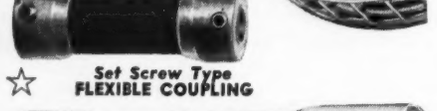
specify couplings by

Guardian



Molded Nylon Jaw FLEXIBLE COUPLING

Set Screw Type FLEXIBLE COUPLING



"SILENT TENSION" Splined Sleeve FLEXIBLE COUPLING

Only Guardian makes all three types* of couplings used in the Oil Burner Industry . . . to fit any blower wheel!

Only Guardian offers all these features:

- **Dynaline Fabrication**—elements stay in line because they're spun together **while running true.**
- **One-piece Construction**—easier to assemble and remove—saves time.
- **"Silent Tension"**—for snug fit, quiet operation and longer service life.
- **Molded Nylon Jaws**—DuPont Nylon for longer wear . . . 2 alternate locations for faster, easier location.

Send for Guardian Catalogs C101 and C104.

HANDY SERVICEMEN'S KITS—Four sizes—Standard and Economy assortments. Steel case. Meet 99% of service needs.

GUARDIAN QUALITY OIL VALVES

Four styles to meet Underwriters' Laboratories under-tank opening requirements — effective Jan. 15, 1954. Send for Bulletins V-101 and V-101A.

Guardian
PRODUCTS CORP.
COUPLING DIVISION

Dept. F-14, 1231 E. Second Street

Michigan City, Indiana

West Coast Engineering laboratories.

Wayne F. Strong has been elected vice-president in charge of manufacturing for Iron Fireman Manufacturing Co., Cleveland, O. He will head all production in the company's plants located in Cleveland, Portland, Ore., and Toronto, Canada. Strong began his career with Iron Fireman 24 years ago in the shipping department and has been promoted through various phases of production. Replacing Strong as manager of the electronics division in Portland is *Robert V. Jack* who joined the company in 1942 as an industrial engineer. The electronics division produces automatic controls for heating and power equipment.

Arthur J. Hahn, Jr., has been appointed public relations manager of Utica Oil Heating Corp., Utica, N. Y. He was recently discharged from military service.

J. O. Hendrickson has been promoted from the Kansas City to the Chicago office of the Oil Industry Information Committee of the American Petroleum Institute. As senior representative in the Great Lakes District (Illinois, Indiana, Michigan and Wisconsin) he succeeds *John F. Campell* who recently became regional supervisor for the Midwest. *Richard B. Joyce* succeeds Hendrickson in Kansas City.

D. N. Latus & Co., Helena, Mont., has been appointed distributor for Perfection Stove Co., Cleveland, O. Territory includes Montana and part of Wyoming. Another appointment by Perfection was made in Colombia, S. A., when J. P. Lizarazo was named distributor for the Provinces of Cuninamarca and Boyaca.

Truog-Nichols Distributing Co., Kansas City, has been appointed wholesale warehouse distributors for Chrysler Airtemp, Dayton, O., in Kansas City, Mo.

watch for our 1954 MODEL ANNOUNCEMENTS

field

draft controls

- World's most widely used Barometric Draft Controls
- The controls preferred by manufacturers, jobbers and dealers
- Publishers of the first draft control guide for installing dealers

Field Control Division
of H. D. Conkey & Company
Mendota, Illinois

●

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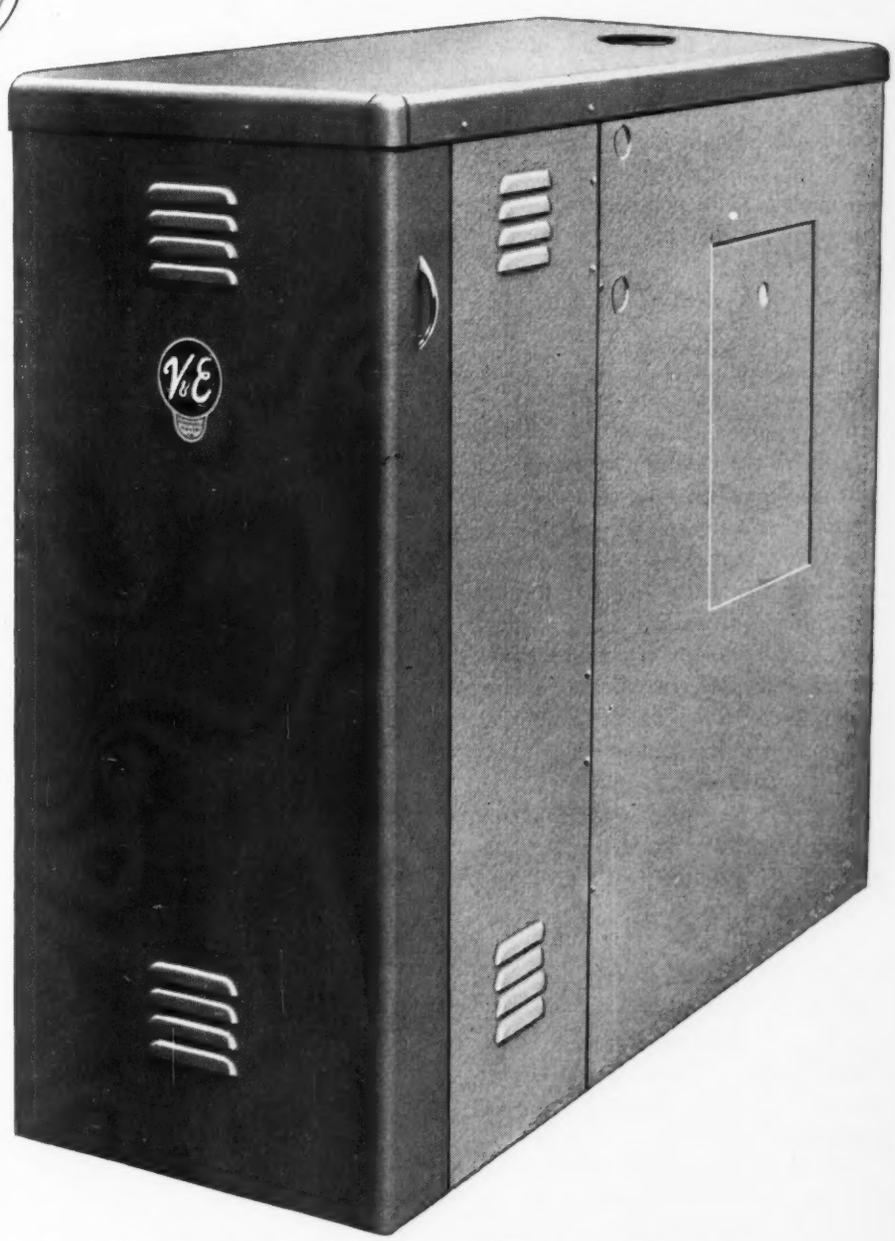
Cranes, Hoists

THE V&E SCHUYLKILL HAVEN, PA.

WATER TUBE

BOILER BURNER UNIT

PROVIDES HEAT AND YEAR ROUND HOT WATER



If you've been shopping around for a boiler burner unit that features QUALITY first, ECONOMY of operation and absolutely trouble free performance—then you owe it to yourself to see this V&E Down Draft, Steel, Water Tube Unit. People who know boilers—leading engineers—install V&E Units in their own homes because they know that they are getting units whose every feature has been thought out and constructed by leaders in the industry. Yes, as you will see in the report on Detailed Performance issued by one of the outstanding test laboratories in the country—you just couldn't buy a better boiler burner unit than a V&E no matter how much you spent.

Yes, it'll look good in the cellar—and on the budget too and the only time your customer will ever get in hot water with a V&E is when he takes a bath . . . and then the supply is practically inexhaustible. . . .

Yes. . . . Get the facts . . . and you'll sell a V&E and you'll be mighty glad you did!

- Fast Heating
- No Pulsation
- High Efficiency
- Easy to Clean
- Priced Right

DOWN-DRAFT
Water Tube Boilers

7 CAPACITIES 480-2320 sq. ft. stg. H.W. or equiv. steam. (largest 55" high x 44" long x 22½" wide)

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Literature and Prices

V & E PRODUCTS, INC.

SCHUYLKILL HAVEN, PA.

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	BALTIMORE	BUFFALO	PHILADELPHIA	SCHUYLKILL HAVEN	WORCESTER
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Editorial Leaks

THE NEW YEAR means many things to many people. To some it's an opportunity for a clean slate if the old year seems to have been muddled or just unprofitable. Again it may be an occasion for jubilation just on general principles . . . an occasion to let off steam and act like kids again. To still others it's a milestone on the road to total human depravity . . . atomic age, the mystery of iniquity abroad in the earth.

But to our crew at the magazine it's nothing so involved as any of these. Instead, it's the end of a hardworking month wherein we take the splendid material that many of you send us and work it up into the 32 page special section of this issue and call it our "Oilheating Yearbook."

We always present it with a feeling something like the cook when she struts in with the birthday cake . . . and with plenty of candles because this effort goes back many years.

We sincerely hope that you find the facts and figures of some help in your planning for a better-than-ever 1954.

❖

BECAUSE SO MUCH of the editorial space in this issue is occupied with the annual analysis we have only one other feature article . . . a story about a very unusual heating installation in a school building at Kalamazoo.

Not the least unusual feature is the fact that a heating equipment manufactured, Homer Brundage, is president of the school board. As you would expect, Homer wanted this heating job to be the last word in everything desirable and he arranged it that way with the architect.

But now for the whimsical note in the story. Homer naturally drooled to have his own blower equipment used all the way in this illustrious show job. He is president of The Brundage Co.

But try as he might, he couldn't bring himself to do it. When you're in public office, reasoned Homer, you just can't let them specify your own private product. So there's not the tiniest piece of his own equipment in the whole building. And he's given literally months of his time to be sure of the last word in perfect jobs, all dolled up with competitive blowers.

❖

MAYBE IT'S A good idea and maybe it's not so hot. In an occasional spot about the country we have encountered fuel-oil trucks which like all good trucks have a horn. But instead of screeching raucously to scare you out of your wits, these trucks have a musical horn that tootles, "Keep the Home Fires Burning." What's wrong with our industry adopting it on a broad scale, so that whenever folks hear that tune they think of oilheating? If you're interested, we'll dig up more information.

❖

AT THE WARM Air Convention in Cleveland last month, Dean Miller, who heads all educational activity, made a good point. In committee meetings of his various groups questions would come up about some possible change in courses or manuals, changes that had not been previously explored.

His admonition ran something like this, "Write your thoughts out in longhand here in this room, or in any event before you leave this hotel. Too many men get good ideas that they plan to write up after they get home. But when you're back at the desk you find it piled high and you forget all about the good idea, so don't leave town with it unwritten."

No wonder Michigan State, the Dean's home port, made such a showing at the Rose Bowl.

❖

WHILE DRIVING THROUGH Ohio and Indiana with the radio on, comes 6 PM and a Columbus station is advertising fueloil. It's "for those who heat with oil their business place or homes." But then the announcer booms, "This heating oil conforms to the specifications of the Society of Automotive Engineers."

He was apparently daydreaming about the kind of oil we next experienced when that same night at 11 an Indianapolis radio announcer brought an important special bulletin. "The manager of a local oil company warns that a man came in with a two-gallon can, wanted kerosene for heating. By mistake he was given white gasoline." "Must be handled with great care" the announcer pleaded.

Arriving at the Claypool Hotel in Indianapolis, asked the bellboy how the building was heated. "Oil," he says, with an offer to show us the boiler room later. But next day we found no boilers; it was heated with street steam.

The Society of Automotive Engineers seems to have things all gummed up.

❖

IT WAS FRIDAY night November 6, the time of the first real snow and blow the East has had for many a moon, and it was frigid to boot.

An oilheating dealer in the Oranges (New Jersey) had a call from a homeowner asking if he could send a man to get a gas furnace working. The owner had called the big gas utility and was informed that their men didn't work in the week-end, but they'd be sure to get to him early Monday.

The oil man fixed him up pronto.

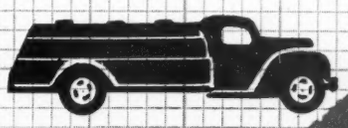
"And," gloates Aaron Rich as he tells of this incident in his Association's bulletin, "Under the Fill," "fuel-oil marketers can rightfully be proud of their record, regardless of weather or day, consumers can depend on them."

"So you wanna increase my business fifty percent? Make me work twice as hard, move to a bigger building, hire help, double my income tax? Get out before you give me ulcers!"

Courtesy of V. P. Black, Airtemp.

A PROVEN WAY TO *BIGGER* PROFIT

In fuel oil delivery there are three basic objectives to strive for daily:



- **MAXIMUM GALLONS DELIVERED**
- **MINIMUM MILES TRAVELLED**
- **MINIMUM WASTE OF TRUCK AND DRIVER TIME**

VENTALARM Signals make it possible for you to attain these objectives to the ultimate degree. If you have not already done so, *there is no sounder profit-building decision you can make than to equip ALL your old customers' tanks with* VENTALARM Signals.

If you are already one of the several thousand fuel oil dealers who are using VENTALARM Signals on both new and old tanks, there is probably no point to your reading this. If, however, you are one of the many remaining fuel oil dealers who perhaps are only partially using VENTALARM Signals or not using them at all, your decision to take action in the next few minutes may prove to be the best-paying minutes you will enjoy in the next twelve months!

Perhaps you have been hesitating about installing VENTALARM Signals on all your old customers' tanks because you felt that the initial purchase and installation cost would be burdensome. Let us show you how for every dollar you spend, you will receive ten-fold return. Write to us for literature so that you will have the COMPLETE story. Then we'll be glad to trust your good judgment. Every benefit that the use of VENTALARM Signals offers will stand up under hard common sense business analysis.

MODEL LC
FOR OLD TANKS

1. Saves driver and truck time.
2. Eliminates run-outs.
3. Eliminates repeat calls.
4. Assures properly filled tanks.
5. Makes oil delivery truly automatic.
6. Provides better means of meeting gas competition.

At our NEW ADDRESS.

SCULLY SIGNAL COMPANY

174 Green Street, Melrose 76, Mass.

Available at your regular Supply House.

Scully Products are manufactured under U.S. and Foreign patents and patents pending.

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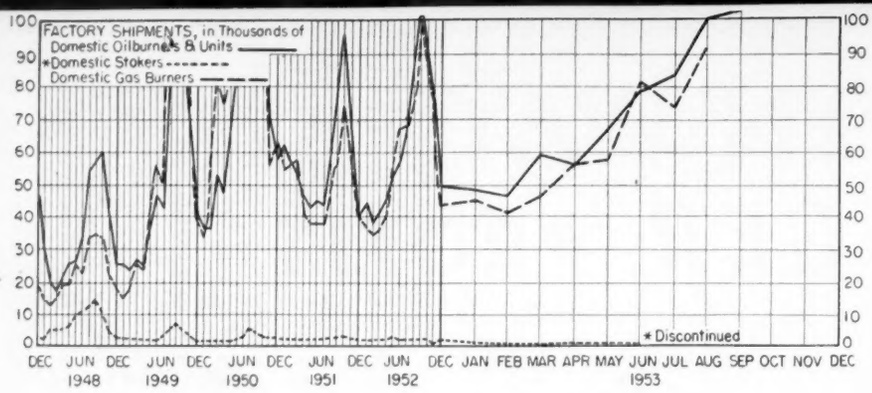
VENTALARM®

WHISTLING TANK FILL SIGNAL

Canadian Licensee: EMPIRE BRASS MFG. CO., LTD., London, Ontario

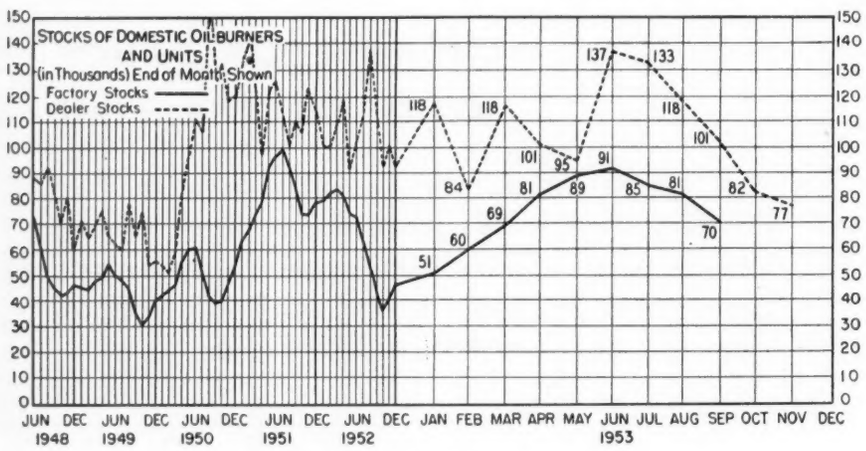

FACTORY SHIPMENTS, in Thousands of
Domestic Oilburners & Units
*Domestic Stokers
Domestic Gas Burners
* Discontinued
DEC JUN DEC JUN DEC JUN DEC JUN DEC JUN DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
1948 1949 1950 1951 1952 1953

Shipments of Oilburners and Units

(Including Exports)

Adjusted to include manufacturers other than the 145 reporting to Census Bureau, FUELOIL & OIL HEAT's estimates of shipments are:

	SEPTEMBER			NINE MONTHS		
	1953	*1952*	*Percent Change*	*1953*	*1952*	*Percent Change*
Conversion	69,590	73,535	— 5.4	428,136	363,027	+ 17.9
Boiler Units	8,933	9,145	— 2.3	51,062	45,789	+ 11.5
Furnace Units	23,576	23,432	+ 0.6	141,202	127,695	+ 10.6
All Domestic	102,099	106,112	— 3.8	620,400	536,511	+ 15.6
Commercial	4,168	3,616	+ 15.2	31,670	25,516	+ 24.1
Total	106,267	109,728	— 3.2	652,070	562,027	+ 16.0


STOCKS OF DOMESTIC OILBURNERS AND UNITS (in Thousands) End of Month Shown
Factory Stocks
Dealer Stocks
JUN DEC JUN DEC JUN DEC JUN DEC JUN DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
1948 1949 1950 1951 1952 1953

November Minimum Prices: Key Dealers

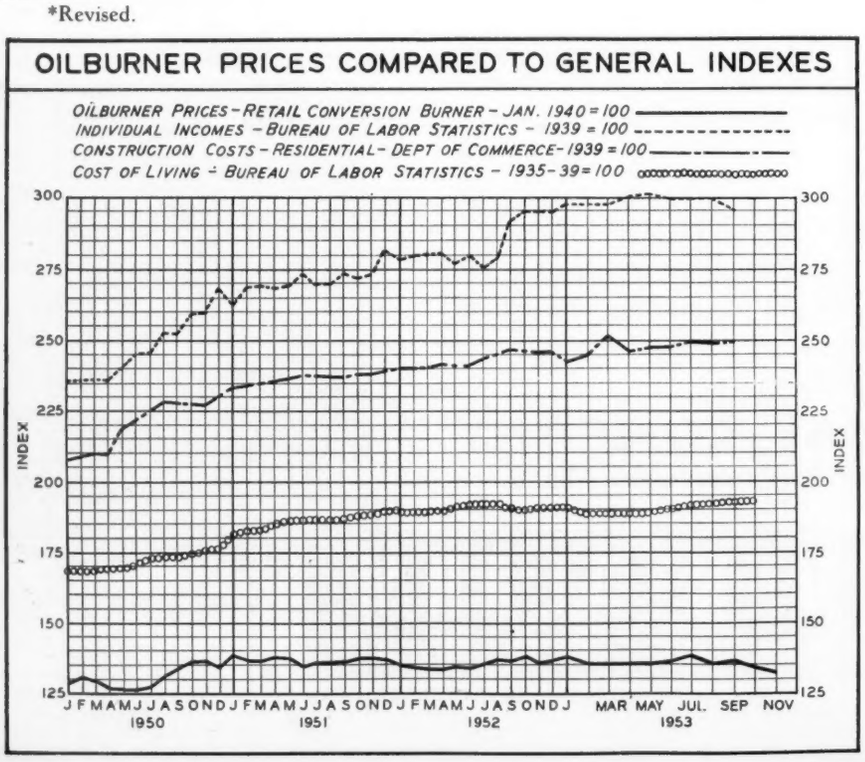
	CONVERSION BURNERS	BOILER-BURNERS	FURNACE-BURNERS
November	$320	$703	$626
October	318	715	630

Price Index: Conversion Burners: January 1940 is 100%

	WHOLESALE				RETAIL			
November	136.8	Six months ago	142.4	November	132.4	Six months ago	137.2
October	135.1	Year ago	144.4	October	132.4*	Year ago	135.7

*Revised.

OILBURNER PRICES COMPARED TO GENERAL INDEXES


OILBURNER PRICES – RETAIL CONVERSION BURNER – JAN. 1940 = 100
INDIVIDUAL INCOMES – BUREAU OF LABOR STATISTICS – 1939 = 100
CONSTRUCTION COSTS – RESIDENTIAL – DEPT OF COMMERCE – 1939 = 100
COST OF LIVING – BUREAU OF LABOR STATISTICS – 1935-39 = 100
INDEX
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1950 1951 1952 1953

Oilheating Trends

NOVEMBER INSTALLATIONS of domestic oilburners and units, estimated at 97,366 were higher than had been expected. They were 25% above the 77,777 estimated for the same month in 1952. The principal factor in the strong November showing was the new home segment which was estimated at 42,978. Replacements of old oilburners were approximately 9,660 and conversions from other fuels 44,728.

The total installations for the first eleven months of the year were approximately 733,098. Factory shipments to the end of September, the latest Government data, are approximately 16% above last year. Unofficial estimates show shipments in the last quarter of the year to be quite substantially below 1952. This shows an interesting trend for the year. Factory shipments started the year well above retail sales, and then gradually declined while the actual installations have gained headway. In the fourth quarter shipments will obviously show a minus comparison while consumer sales are substantially up from last year. This is a very healthy condition for going into the New Year.

BURNER STOCKS: Dealers had on hand on December 1 approximately 77,075 domestic oilburners and units. This compares with 92,373 the previous month and 101,376 the previous year. The current stocks were divided: Conversion oilburners, 39,347; boiler-burner units, 14,878; furnace-burner units, 22,850.

Factory stocks on September 30 were 69,515 compared with 43,703 on the same date last year.

A CONTAMINATION-FREE PRODUCT with OPW

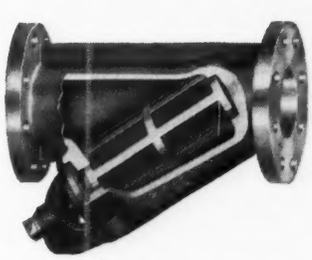
187 LINE STRAINERS

Bottom Outlet Type

Is your product absolutely clean, your pump and loading valve protected against scale, grit, dirt and other foreign materials?

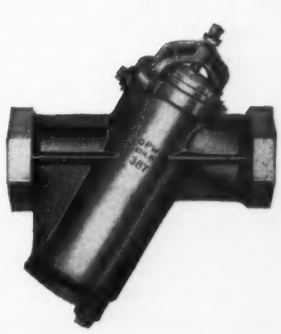
Be sure! Use OPW Line Strainers for a contamination free product. Tight fit of cage and screen assures all product passing through strainer. Screen areas are many times pipe size for full flow. The simplicity of screen removal, cleaning and replacing, facilitates regular, periodic checkup in the shortest possible time.

Choose your size, type and mesh! 125-pound standard or 200-pound high pressure types. Bottom or top outlet cage, reinforced for sturdiness and precision-fit. Screwed or flanged end. Flanges, bolts and gaskets to suit. Strainer meshes from 14 to 300.



No. 187-F

Bottom opening type. Heavy cast iron body, 125 pound. Furnished with 40 mesh bronze cage, reinforced screen for gasoline, 14 mesh brass screen for fuel oil.

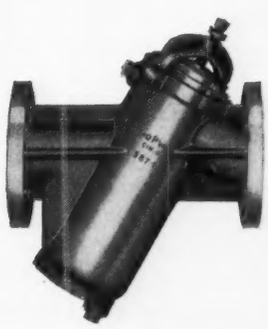


No. 387

Top outlet type. 125 pound. Heavy ribbed iron body has tapped plug in top section for air relief connection, also bottom drain plug. Both drilled for seal wires.

No. 487-F

Top outlet type 200 pound flanged, drilled and faced on pipe ends with bolted, gasketed cap.



No. 387-F

Top outlet type cage, perfect for pit application. 125 pound flanged, drilled and faced. Cap can be seal wired to prevent tampering.

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FOR HANDLING HAZARDOUS LIQUIDS
OPW
VALVES · FITTINGS · ASSEMBLIES
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fueloil & oilheat

TANK STOCKS: Dealers had in storage on December 1 approximately 46,978 consumer oil tanks. This is a small rise from 41,692 the previous month, but a substantial drop from 84,409 on December 1, 1952. By sizes the current stocks were divided: 220-275 gallon: 40,818; 550-675 gallon: 3,538; 1,000 gallons or larger: 2,558.

The average price paid by dealers in November for 275 gallon tanks was $34, showing no change from October. By sections of the country the November average was: New England, $29; Mid-Atlantic, $36; Midwest, $32; Pacific Northwest, $40.

YEAR-END VIEWPOINTS: Quite a number of questions were asked of the reporting group to measure some of their overall impressions as they move into the new year. In the first question we were exploring an impression that had been going the rounds at the annual convention at API in Chicago. This had to do with relationships between the fueloil marketer and his supplier. Apparently there has been some improvement during the year because 28% of the reporting companies report noticeably happier relations with their suppliers while only 11% feel that these relations deteriorated during the year. The remaining 61%, of course, said there was no appreciable change.

The dealers were then asked if they had noticed any improved attitude, or more cooperative attitude, among the people with working responsibilities in their organizations now that we have a Republican administration. A third of them say there has been an improvement and the other two-thirds see no change.

Carrying this appraisal beyond the point of employee relationships, dealers were then asked if they find any other business conditions improved over what they were under the Democrats. One-fourth of them report improvement and the others report no change. Those who indicated better conditions had some specific reasons.

Typical were these: "Less controls by Government" . . . "My own attitude is better" . . . "Did the Republicans bring this warm weather?" . . . "Everybody was happy this year" . . . "Less resentful of layoffs" . . . "Rid of troublemaker" . . . "Less union pressure" . . . "Greater feeling of security" . . . "Prices go back to supply and demand relationships" . . . "People are more on their own" . . . "More solid footing" . . . "The defense plants are laying off good men who are grateful to get a steady job with us."

There has been a lot of interesting discussion in the past few years as to whether fueloil margins should be on a percentage basis of the selling price or

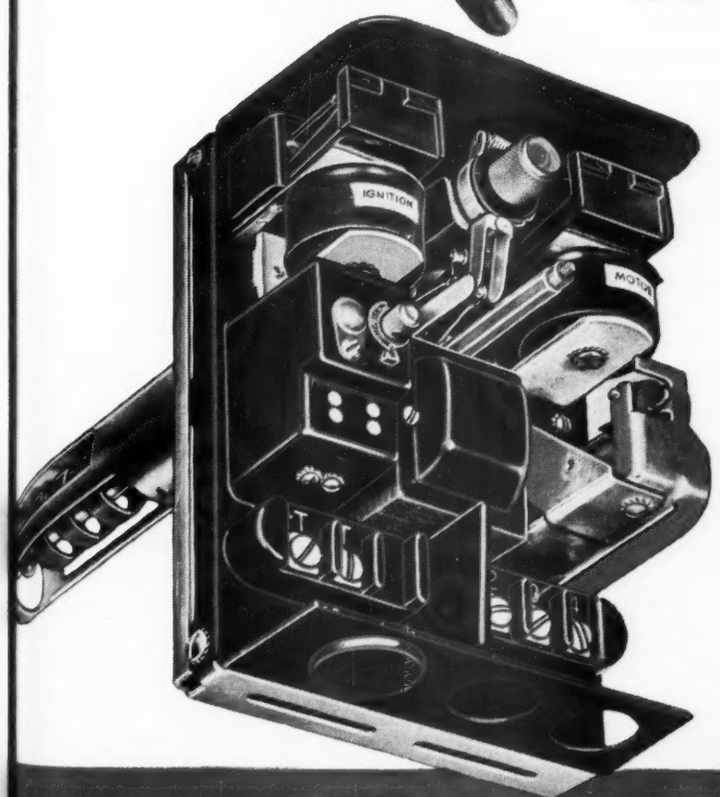
Oilburner* and building Permits

OILBURNERS					DWELLINGS			
November		11 MONTHS			November		11 MONTHS	
1953	1952	1953	1952		1953	1952	1953	1952
23	64	291	484	Albany, N. Y.	..	..	..	..
124	544	1307	2032	Baltimore, Md.	196	388	3702	3370
..	..	..	..	Binghamton, N. Y.	6	7	28	97
..	..	..	..	Bloomfield, N. J.	20	4	303	95
..	..	..	..	Boston, Mass.	31	35	354	561
149	226	1358	1062	Bridgeport, Conn.	..	..	..	..
..	..	..	..	Buffalo, N. Y.	34	31	489	530
69	64	529	479	Columbus, O.	..	..	..	..
..	..	..	..	Des Moines, Ia.	632	258	4538	1148
..	..	..	..	Detroit, Mich.	268	245	2824	3735
76	109	540	611	Elizabeth, N. J.	..	2	..	67
49	25	364	367	Freeport, N. Y.	..	..	..	..
..	..	..	..	Greenwich, Conn.	29	37	302	396
..	..	..	..	Hackensack, N. J.	9	4	63	143
..	161	..	1129	Hartford, Conn.	..	..	..	..
..	..	..	..	Hudson County, N. J.	..	..	..	..
23	16	437	474	Irvington, N. J.	3	1	28	29
..	..	..	..	Lynn, Mass.	15	20	169	201
74	25	..	426	Meriden, Conn.	..	..	..	..
660	396	7284	4305	Milwaukee, Wisc.	228	252	3424	2765
31	78	382	987	Minneapolis, Minn.	66	447	989	1448
13	19	243	260	Montclair, N. J.	..	..	..	..
..	..	..	..	Morristown, N. J.	10	15	85	64
36	28	361	353	Mt. Vernon, N. Y.	..	..	..	..
118	94	1838	2035	Newark, N. J.	..	..	..	..
85	92	688	1090	New Bedford, Mass.	..	..	..	..
49	40	465	619	New Haven, Conn.	..	..	..	..
..	..	..	..	New Orleans, La.	..	..	..	..
32	51	..	406	New Rochelle, N. Y.	13	41	430	302
..	..	..	..	New York City (Total)	..	..	..	..
1746	..	..	..	Brooklyn-Queens	..	..	..	..
..	812	..	6771	Manhattan, Bronx, Rchd	..	..	..	..
60	78	671	789	Norfolk, Va.	22	53	585	1116
..	..	..	..	Oakland, Calif.	..	..	..	..
41	193	428	1116	Omaha, Neb.	63	63	1482	1055
17	14	198	217	Orange, N. J.	6	1	24	20
12	22	215	274	Passaic, N. J.	..	..	..	..
37	48	617	819	Paterson, N. J.	6	20	143	206
710	..	..	..	Philadelphia, Pa.	..	..	..	..
..	..	..	..	Plainfield, N. J.	3	10	124	164
81	87	667	600	Portland, Me.	17	19	180	125
236	395	3670	4273	Portland, Oreg.	100	99	1821	1471
19	39	223	209	Poughkeepsie, N. Y.	..	..	..	..
..	130	..	1115	Providence, R. I.	..	12	..	178
..	..	..	..	Reading, Pa.	330	4	398	70
52	47	337	399	Richmond, Va.	27	37	495	536
38	25	..	562	Roanoke, Va.	..	..	..	..
259	235	2888	3287	Rochester, N. Y.	..	..	..	..
12	10	185	155	Rockville Center, N. Y.	0	8	84	70
54	72	399	453	Salem, Mass.	3	3	74	53
263	175	1819	1597	St. Louis, Mo.	30	24	321	481
27	65	229	540	St. Paul, Minn.	68	45	1049	1145
18	49	172	313	Schenectady, N. Y.	..	..	..	..
..	..	..	..	Seattle, Wash.	110	140	1527	1723
..	..	..	..	Spokane, Wash.	..	..	..	..
..	..	..	..	Springfield, Mass.	62	75	920	785
..	60	..	..	Stamford, Conn.	..	..	..	..
..	3	..	92	Syracuse, N. Y.	..	33	..	461
..	..	..	..	Trenton, N. J.	5	4	152	123
..	..	..	..	Utica, N. Y.	6	8	119	172
84	176	782	1269	Washington, D. C.	..	..	..	..
..	..	..	..	West Orange, N. J.	16	15	272	382
24	35	312	344	White Plains, N. Y.	8	7	250	134
87	63	859	720	Wilmington, Del.	1	13	151	191
185	146	1372	1799	Worcester, Mass.	..	..	..	..
69	80	832	786	Yonkers, N. Y.	..	..	..	..
2339	3319	23547	28871	*Totals*	2097	2034	22698	20284
—3.0	..	—1.8	..	*Percent Change*	+3.1	..	+12.0	..

*Permits are not total sales in each market since none are reported from suburban areas, which normally account for 20% to 60% of total sales in each market; nor are they an accurate index where enforcement is lax. Rightly used, however, they are a useful working index.

Mr. Dealer:
This White-Rodgers STACK SWITCH will operate satisfactorily at Temperatures as LOW as 200°

Abnormal stack temperatures need no longer cause you trouble . . . or needless call-backs. You will get fast reliable operation at stack temperatures as low as 200° . . . or as high as 1000°



A built-in timer, adjustable by turn of knob, insures your desired ignition period regardless of stack temperature.

Rugged construction and design of stack element and case assembly prevent rough handling and effects of soot and dirt from upsetting control performance.

Check for yourself! Don't install another stack switch until you have tried the superior performance of this White-Rodgers control. Your supplier will furnish them either separately or on the equipment you install.

WHITE-RODGERS

Controls FOR REFRIGERATION HEATING AND AIR CONDITIONING

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CLEVELAND, OHIO — 5005 Euclid Ave.
DETROIT, MICH. — 16590 Wyoming Ave.
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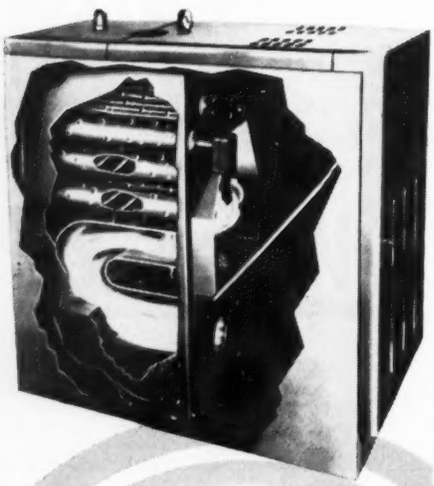
IN CANADA, WHITE-RODGERS LIMITED, 611 GERRARD ST. EAST, TORONTO 8, ONTARIO

THE NEW YORKER
HORIZONTAL BOILER

...offers you top efficiency and economy!



The NEW YORKER horizontal tube boiler provides top heating efficiency because of its scientific "three-pass" design, offering maximum heat transfer and lowest stack temperature. All heat passages are surrounded by heat-absorbing surfaces. Beautifully jacketed in blue-and-gray hammertone finish.

- Oversize, large capacity tankless water heater.
- Fire-tubes of extra heavy gauge steel.
- Pre-cast combustion chamber withstands temperatures up to 3200° F.
- Fire-tubes easily accessible.

Send coupon NOW!

New Yorker Steel Boiler Co., Inc.
Colmar, Penna.

Gentlemen:
Please rush me full information and prices on the New Yorker horizontal tube boiler!

Name .....

Street .....

City ..... State .....

Type of Business .....

whether they should remain on a cents-per-gallon basis as most companies have them today. The reporting fueloil distributors were asked to vote on this. Surprisingly the vote showed about three companies preferring the present cents-per-gallon basis for each two companies who want to switch to percentage margins. That does show a high interest in the percentage plan since practically none of them has it today. Naturally there are advantages both ways. In a firm market the percentage basis might gain more actual dollars, but in a buyer's market the reverse would more likely be true.

Gas competition is a perennial topic among fueloil men, so they were asked how they appraise the outlook in this connection for 1954. For each company that says gas competition will be easy to handle, there were six that say it will be tougher.

This is a fortunate attitude providing it means that the oilheating fraternity will step out and sell harder. This will undoubtedly be the attitude of the companies that sell both fueloil and oilburers, and fortunately that represents a major segment of the market.

Skilled manpower continues to be a problem, primarily having to do with good installation and service men. Among the reporting dealers three-fifths have all the good men they need. The other two-fifths stated the number of additional experienced men that they need as of now. On the basis of their reports the industry needs about 2,000 more experienced men than it has available for installation and service work, and, of course, this was the situation in December when the rush period is past.

Profits in 1953 are ending up lower than in 1952. Among the companies in the group 42% estimate that their final 1953 profit will be higher and 58% say it will be lower. They have in mind, of course, net profits before income tax. Relating the profit estimates of each reporting company to its relative size in the market, we find that the profit expectation on the entire group is 7% below 1952. Notice that this does not say that they are losing 7%, rather it says that if they earned $20,000 net last year they are earning $18,600 net in 1953.

The final question in this series of year-end viewpoints inquired as to what business changes they were planning for 1954. It was very encouraging to discover that the item heading this list was an enlargement of selling effort, with 29% of the companies planning to do this. Most of them had in mind doing a better selling job on oilheating equipment. Their answers were in several forms. For example, some plan to hire a new sales manager, some will add salesmen, some others who have been more or less taking orders over-the-transom are now convinced that they must go out after business.

The 29% figure did not include 5% of the companies who say specifically that they are budgeting more advertising for 1954, and 4% of the companies who plan to open up a heating equipment showroom.

The second largest item in number of responses representing 14% of all companies we will call "improve efficiency." This had to do with several phases of fueloil and oilheating operations, but basically it reflects a feeling that we are moving into a buyer's market where profits will be limited to the companies who do the best job. That 14% did not include some specific items, such: as "revising our delivery methods" . . . "enlarging our service department" . . . "Establish an incentive program" . . . "Reduce overhead" . . . "More training all around" . . . and "Cut burner department losses." When you get all of those into the picture the whole self-improvement thinking is reflected by 27% of the reporting companies.

The third most important classification had to do with enlarging the physical properties. One-eighth of the reporting companies will add in 1954 a new office building, a new warehouse, a new garage or additional storage capacity at the bulkplant.

Among the activities reported by a lesser number of companies, these are included: "Install a two-way radio system" . . . "Add cooling equipment to our heating line (5% of reporting companies)" . . . "Prepare to combat electric heating which is becoming important in our market" . . . "Rebuild our own fuel units and controls" . . .

12 YEARS ON THE JOB ...WITH NO SERVICE NEEDED!

B&G BOOSTER SHOWS NO EVIDENCE OF WEAR IN ANY PART

The illustration above is an actual photograph of a B & G Booster after 12 years of operation. During this period, the pump did not require service of any kind. When disassembled and critically examined, no measurable signs of wear could be detected in the shaft, seal and bearings.

This is pretty substantial evidence that in every detail of design, materials and workmanship, B & G Boosters are built for long life and dependability. It explains why more B & G Boosters are sold than all other similar pumps combined.

Send for B & G Catalog giving size and capacity data on B & G Boosters and Universal Pumps.

And here's today's Booster—engineered to new space-saving compactness, yet just as powerful

There is no point in employing a 1/6 H.P. motor to do a job actually requiring only 1/12 H.P. That's why B & G Boosters up to 1¼" are now built with a smaller motor—but have exactly the same capacity as previously.

This motor is the first to be specifically designed to match the reduced size of modern boilers and equipment. Heretofore, pumps were designed to conform to the characteristics of available motors. Now B & G builds a motor in its own plant which permits integrated design between pump and motor.

BELL & GOSSETT
COMPANY
Dept. DG-7, Morton Grove, Ill.

Canadian Licensee: S. A. Armstrong, Ltd., 1400 O'Connor Drive, Toronto, Canada

fueloil & oilheat

Government Influences on Fuels

by

Milburn Petty

WASHINGTON — Both sides in the Phillips Case contend that their aim is to assure consumers natural gas at "reasonable" prices.

The cities of Milwaukee, Detroit, Kansas City and others precipitated the issue by asking the Federal Power Commission to roll back the prices for gas charged by Phillips Petroleum Co. in sales to interstate pipelines.

The FPC declined to do so, holding that it had no jurisdiction over Phillips. But the appellate court ordered the Commission to regulate Phillips' prices and, so far, the Supreme Court has refused to review this decision.

Gas producers, generally, fear that FPC control will result in lower field prices destroying the incentive to find new gas reserves and bring about short supplies and higher consumer prices in the long run.

Coal Whets Knife for Gas

Meanwhile, the coal people are gunning for natural gas which they are coming to regard as a competitor more to be feared than fueloil.

They are seeking legislation for a ban on the export or import of gas where it might "harm" the domestic coal industry. Also, they want the FPC to be required to deny certificates to gas pipelines into coal areas for "inferior uses."

In the coal-state legislatures, there will be further efforts at laws requiring "safety" measures for the underground storage of natural gas.

Drive on Residual Planned

The coal people have stepped up their drive for legislative restrictions on imported residual fuel oil.

Their proposed 5% limit on residual imports would reduce the inflow by about 80%. Effect of this can be seen from recent testimony that 82% of the heavy fueloil imported by Asiatic Petroleum Co., for example, was brought in for independents.

The Independent Petroleum Association of America, and other producer groups, are now hopeful that the imports "problem" can be solved within the industry. They are showing little or no interest in imports of residual. Their criticism of "excessive" imports has centered on oil from the Middle East.

Apparently, the IPAA is coming around to the idea that, since "supplementary" sources of oil would be needed in case of an emergency, it would be better to have them in the Western Hemisphere. (Another factor is that many American independents are now operating in Canada and some may soon obtain concessions in Venezuela.)

Voluntary Curb Idea Gains

Hopes for a voluntary solution of the imports "problem" have been strengthened by the position taken by the New Jersey Standard.

Eugene Holman, now SONJ's board chairman, noted that segments of the domestic industry have recently become convinced that imports "are exceeding amounts necessary to supplement domestic supplies."

He expressed the hope that "each importing company will exercise industrial statesmanship to the end that existing differences of opinion will be composed within the industry during the coming year."

Wants Oil Transport Expanded

Defense planners are worried over the adequacy of oil transportation facilities to meet a wartime emergency.

This fear is evident in their persistent urging that a "Giant Inch" pipeline system to the East Coast be built now, capable of transporting a million barrels daily from the Gulf Coast and the Middle West.

Strong opposition from the industry has been manifested. But some sort of survey likely will have to be made to satisfy the planners. The finding probably would be that no single company or group would be willing to undertake such a project.

At the most, the recommendation would be that the government buy the necessary pipe now and stockpile it. If ever needed, the line could be built by the government.

Meanwhile, the dearth of tanker building to replace obsolete American-flag vessels has prompted the U. S. Maritime Administration to draw up a legislative proposal to liberalize the trade-in of old tankers on new ship construction.

Oil Inquiry Still Pending

The House Commerce Committee still has not filed a report on its investigation of last summer's oil price increases.

Chairman Wolverton (R., N. J.) and his chief lieutenant, Rep. Heselton (R., Mass.) loudly criticized the oil companies—but there were signs that their views were not shared by a majority of the committee.

On the Senate side, Chairman Malone (R., Nev.) has stated that the hearings by his subcommittee have shown that imports are "excessive." But he favors the tariff route. (Coal witnesses have said that even a $1.50 per barrel tax would not substantially alter the coal vs. oil situation on the East Coast.)

It is not expected that Malone will go for the "end use" controls advocated by the coal interests. And even if he did, the full committee would reject any such idea.

FTC Probes Fueloil Suppliers

Responding to the resolution, adopted by the National Oil Marketers Association requesting that its inquiry into "exclusive dealing" arrangements in the sale of fueloil be broadened, the Federal Trade Commission reports:

"The Commission at present is conducting an investigation of alleged practices by other major oil companies which are substantially similar to those prohibited in the cease and desist order involving the Shell Oil Company in Docket No. 6051."

The complaint against Shell (disposed of by a consent settlement) charged that the company had required its dealers to adopt Shell's color scheme on their tank trucks, refrain from selling fueloil of other suppliers, and contract for specified minimum quantities.

YEAR
AFTER YEAR

SUPER

IGNITION TRANSFORMERS

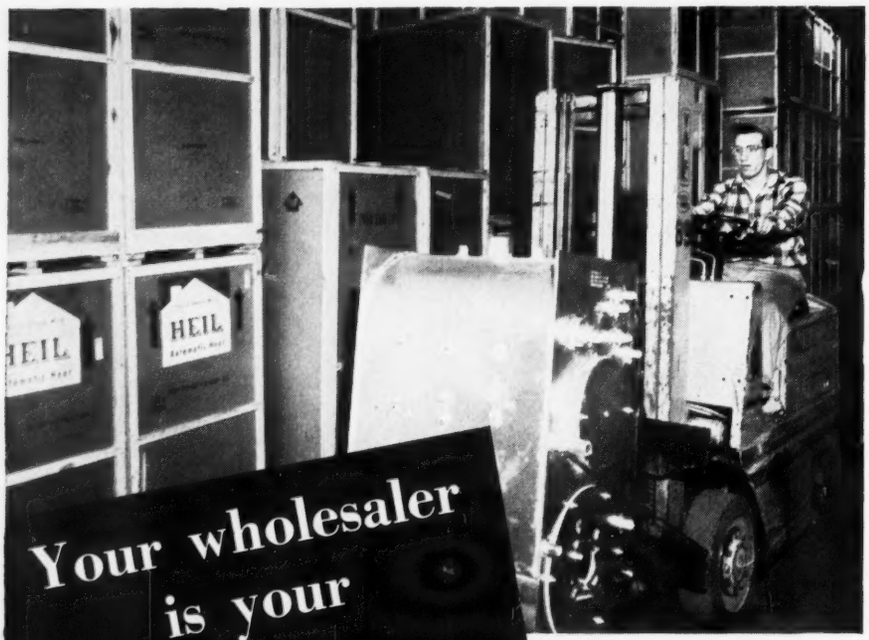
Underwriters
Laboratory Approved.

Sell more in '54
with SUPER *Transformers!*

HAVE PROVEN THEIR DEPENDABILITY, PERFORMANCE & QUALITY

Call US BEFORE YOU COMMIT YOURSELF
FOR THE BEST TRANSFORMER DEAL *Ever*

UNION ELECTRIC and MANUFACTURING CO.
1057 SUMMIT AVE. • JERSEY CITY 7, N. J.



he solves your inventory problems

Your wholesaler is actually a partner in your business. He is in business to help you make money . . . and frankly, if he didn't do just that, there wouldn't be much point to his existence. One big way he helps is by carrying your inventory for you.

Heating contractors and dealers regularly use over thirty sizes and types of furnaces and boilers alone to satisfy common heating requirements. Few dealers can carry enough inventory to fill all of those needs, so it's only practical to rely on your wholesaler to have a wide range of units in stock. By buying from the wholesalers, dealers can have any size heating unit, in any type, with any accessories they need—*at once.*

Wholesalers Eliminate Stock Problems

When a dealer buys from his wholesaler, he not only gets immediate availability from a complete stock inventory, he also avoids a lot of problems. He doesn't have money tied up in inventory, so he's ahead by the amount of interest on that money, and the space he has to provide for that inventory. He doesn't have the headaches of trying to anticipate demands—or the heartaches that come from guessing them wrong. The dealer who buys from his wholesaler eliminates the correspondence and paper work that goes with factory purchases—and the problems of shipping, delays in transit, and damage claims. Obsolescence from model changes never bothers him. His partner, the wholesaler saves him hours of valuable time—hours and hours of worry every month . . . and hours mean dollars.

It Pays to Buy from Your Wholesaler

It's easy to say, "eliminate the middleman," but it just doesn't work. Someone has to perform the services, and your wholesaler is equipped to do so with maximum economy. Wholesalers are more than worth every cent of their charges in terms of not only service for their dealers, but in actual cold cash. If dealers didn't actually profit by buying from them, these "middlemen" would long since have been out of business.

One of a series of advertisements presented in the interests of heating wholesalers all over America by THE HEIL CO., makers of HEIL Automatic Heat. This series is prepared in co-operation with the National Heating Wholesalers Association and the Central Supply Association.

Letters

RAY OIL BURNER CO.
San Francisco 12, Calif.

Editor:

When I was a mere tyke there was a small statue, skillfully carved, depicting three small animals prominently placed on our mantel. You will remember those on your mantel, the "See no evil, hear no evil, speak no evil" monkeys. Perhaps too many of our sales managers and high brass executives of rotary oilburner manufacturing companies learned this lesson too well. In effect, we "See no evil, hear no evil and speak no evil" of our many distributors and installers of heavy rotary oilburners.

The article appearing in FUELOIL & OIL HEAT of November, entitled "Big job Servicing can be a profitable Activity" skillfully, and I believe with a good deal of understanding, suggests a better approach.

Three Types of Dealers

Fundamentally there are three types of dealers installing rotary oilburners. You have selected their prototype. The first is the converted coal stoker, or coal dealer, who, insofar as heavy oil is concerned, is obviously incompetent, has neither the knowledge nor the desire to install a proper industrial oilburning job. This individual should never have been granted a franchise to handle any reputable equipment.

The second dealer, equally as dangerous as the first, and most probably the same dealer, sells horizontal rotary oilburning equipment to a heating contractor over the counter. In many cases, a standard set of installation instructions and prints accompany the crate. The heating contractor, of course, suffers as does the customer. The steam-fitters, outside electricians and a hodge-podge of futile help install the equipment, having, of course, very little knowledge of the intricacies of combustion or heavy oil application. Of course, the burner fails. It never really had a chance.

It would be dead wrong to blame this heating contractor. He may be operating in this manner as his only defense against the converted coal dealer type installer, or because the industry

ADELTA

Outstanding Leadership in Design, Quality, Service, Performance

A COMPLETE LINE OF STANDARDIZED PIPE, DUCT, AND FITTINGS FOR ALL TYPES OF RESIDENTIAL HEATING AND AIR CONDITIONING INSTALLATIONS.

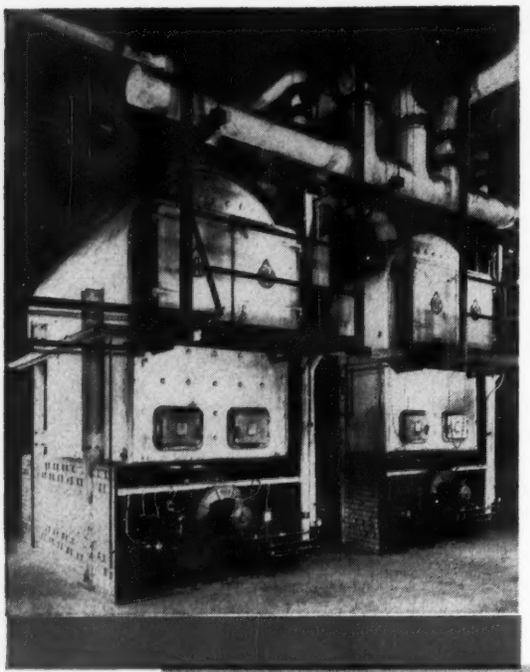
Write for General Catalog 453, Perimeter Catalog 353

INDOOR COMFORT

Adelta Manufacturing Company, Inc.

21st & Ellsworth Streets, Philadelphia 46, Pa.

ADI STANDARDIZED FITTINGS



Two NATIONAL Commercial Steel Boilers serve the heating requirements of the entire Waukegan, Illinois plant and office of the Vascoloy-Ramet Corporation. The heating load approximates 70,000 sq. ft. of radiation, equivalent to 16,800,000 Btu per hour. Permanent scaffolding expedites cleaning and servicing.

View showing the recent one-story addition to Vascoloy-Ramet Corporation buildings in Waukegan, Illinois. This new addition houses the central heating plant. A. Epstein & Sons, Chicago, Architects & Engineers; Ralph Swanson Construction Co., General Contractors; William A. Pope Company, Chicago, Heating Contractor; Oil Burner installation by Mid-West Heat Service, Chicago.

PERFORMANCE *CONFIRMS* RIGHT DECISION

NATIONAL STEEL BOILERS

chosen by VASCOLOY-RAMET CORPORATION for modernized central heating system of newly enlarged plant. When Vascoloy-Ramet Corporation, Waukegan, Illinois, recently built a spacious one-story plant addition, the coal-fired National Steel Boiler that had served the existing plant for many years was threatened with too heavy a strain for the extra load required. It was decided to provide a new central boiler room in the plant addition.

Since excellent results had been achieved with the first National Boiler, two new automatic, oil-fired National Commercial Steel Boilers were installed for heating the entire plant—and for supplying domestic hot water for cafeterias, lunchrooms, lavatories and showers. Low pressure steam from the tandem installation is distributed to radiators, convectors and unit heaters throughout the plant and offices.

Going into their second full season of operation, these new National Boilers are living up to expectations and fuel costs are within original estimates. Vascoloy-Ramet Corporation is now sure it made the right decision!

To help you decide right on heating, write for Catalog FO-507 giving complete information on National Commercial Steel Boilers.

THE NATIONAL RADIATOR COMPANY • JOHNSTOWN, PA.

Complete heating for homes, commercial buildings and industry since 1894

for Real Heating Comfort go NATIONAL

BRANCH OFFICES:
BALTIMORE • BOSTON • BUFFALO
CHICAGO • CLEVELAND • DETROIT
NEW YORK • PHILADELPHIA
PITTSBURGH • RICHMOND • SAN FRANCISCO • WASHINGTON, D.C.

as a whole has failed in its primary duty of selling—and it is a sales job—engineers and owners the fundamental fact that the installation and servicing of heavy oil equipment is a highly specialized trade. Our industry, at the dealer level requires the type of man who understands boilers, brickwork, steam-fitting, electrical circuits, as well as a host of other trades, now including electronics. By virtue of his all around knowledge he is a very specialized engineer and can and does make industrial oilburners "tick," and he makes them "tick" to his profit.

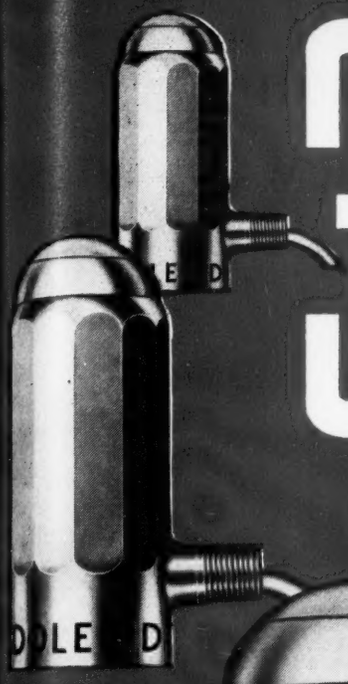
Competent distributors needed

If we had more of these good competent oilburner distributors, they could and would convince the heating contractor that he does not want to buy burners over the counter, but would be most happy to sublet the contract to an independent burner man, who would then have the responsibility for the job. This would, of course, include the brickwork, the wiring, the setting up, the testing and adjusting. This is not necessarily applied to the oil tank and lines, which would normally come under the province of the heating contractor, but would apply to the mechanical setting and connecting of the proper burner to the proper boiler, with the proper firebox and the proper draft conditions.

The third man you have described in your article, obviously knows his business. He knows the limitations of his equipment, pre-engineers his job, weeds out the grief job, which he as a good oilburner man can spot the minute he walks into a boiler room. If the boiler plant is a borderline case he obviously will take draft readings and obtain exact figures as to the amount of fuel being burned in the existing boilers and see to it that they are or can be over-fired.

To sum all this up, the first man you have described does not intend to know his business. The second, the heating contractor has gotten into bad habits by virtue of having to deal with the first type of oilburner distributor. The third man, God bless him, has been properly trained, has a good burner, receives adequate help from his fac-

(*Please turn to page 126*)



3 times faster venting

for one-pipe steam systems

New DOLE 1D AIR VALVE

fixed orifice • tamper proof

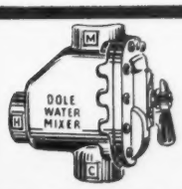
This new valve comes factory-set to vent radiators 2 to 3 times faster than ordinary air valves at low steam pressures. Responds instantly to assure maximum heat flow with significant fuel savings on any modern one-pipe installation—gas, oil, or stoker fired. Fully effective on large or distant radiators—permits ample steam circulation; does not starve the system.

Customers will thank you for recommending and installing Dole 1D Air Valves. They are moderately priced and available now from your Plumbing and Heating Supply Jobber!

Water Flow Control Valve—Maintains constant flow regardless of pressure. Ideal for tankless heaters, water softeners, irrigation, sprinklers, showers.

No. 20 Fully Automatic Air Venting Valve for hot water systems — forced or gravity.

Other dependable Dole controls— preferred by contractors everywhere



Water mixer — delivers more water at desired temperature from tankless heaters or storage tanks.

Automatic Register for forced warm air with individual heat selector for temperature control.

Control with Dole TRADE MARK

DOLE

THE DOLE VALVE COMPANY
1933 Carroll Ave., Chicago 12, Ill.

Representatives in Principal Cities

CRAFTSMAN

SERVICE BODIES

and SIDE BOXES
...SAVE YOU MONEY!

Whether you buy Craftsman bodies built-up (ready to mount on chassis) or partially knocked-down (to save on freight costs) you get all-steel, precision welded bodies built to give you l-o-n-g service!

YET YOU PAY LESS

MAIL COUPON NOW
for complete details

NAME_____

ADDRESS_____

CITY_____ STATE_____

I am interested in a service body for the following chassis:

☐ ½ TON ☐ ¾ TON
☐ 1 TON ☐ 1½ TON

I am interested in Side Boxes to convert my "Pick Up" to a Service Body. ☐

Stahl METAL PRODUCTS Inc.
3490 W. 140 St., Cleveland 11, Ohio

Warm air Convention highlights new Homes

MEETING AT CLEVELAND in the first week of December, some 700 manufacturers and dealers put special emphasis on the new home market in the 40th annual convention of the National Warm Air Heating & Air Conditioning Association. Among the 28 speakers various other topics were covered, naturally, but there was recurring emphasis on the industry's success in new home heating and considerable optimism expressed in its outlook. Home cooling also came in for considerable interest not only on the part of speakers but even more as the manufacturers got together informally. One speaker estimated that residential central cooling had gone into 7% of the new homes in 1953 but the consensus among the members at large was that this was much too high a figure.

The manufacturers who actually make residential cooling equipment for central systems were fairly well agreed that total installations in 1953 have been 30-35,000. Even the most conservative among them believe that the number will be doubled in 1954, as it was this past year over 1952.

Much of the significant work at these Warm Air Conventions is done in committee rooms because this particular association operates a very large educational program and this involves the publishing of a number of books and manuals as well as the development of study courses. For example, heading up under the Educational Advisory Board are ten separate committees who are given the responsibility of handling the 11 printed manuals and sponsoring two general types of educational short courses which are presented each year in 20 cities and in 7 universities throughout the country. These individual committees sometimes spend as much as three or four days of the convention week off in a room at the hotel where they make changes in the manuals or in the courses.

The 20 general short courses which are conducted by G. A. Voorhees, Technical Secretary of the Association, were described and listed in the December issue of FUELOIL & OIL HEAT. The college short courses which are naturally of a more advanced nature are to be located and dated as follows:

At Oklahoma A & M College—February 15, 16, 17 and 18th
At Purdue University—March 3, 4, 5, and 6th
At Michigan State College—March 29, 30, 31, April 1st
At Penn State College—April 14, 15, 16 and 17th
At Syracuse University—April 19, 20 and 21st
At Iowa State College—April 21, 22, 23 and 24th
At University of Wisconsin—July 13, 14, 15 and 16th

These college short courses have anywhere from 90 to 350 students and the tuition is $25. The students take individual problems and work them out in detail under the guidance of a staff of high-grade instructors. Any dealer or his men are eligible.

One of the highlights among the speakers' group was an inspirational talk "To Sell Ya Gotta Tell" by C. S.

Officers *elected at the 40th annual convention of the National Warm Air Heating and Air Conditioning Association. Left to right: First vice-president G. W. Denges, Williamson Heater Co., Cincinnati; President C. B. Phillips, Surface Combustion Corp., Toledo; Second vice-president F. L. Meyer, Meyer Furnace Co., Peoria; and Managing director and secretary-treasurer George Boeddener.*

ASK TO SEE THIS

Desk-Top Demonstration

Miniature Meter and Accessories Quickly Show the Advantages of A. O. Smith *Unitized Construction*

WHEN you see this miniature meter and its *functional* accessories being assembled, dis-assembled and re-assembled in many different ways, you'll quickly appreciate the importance of A. O. Smith *unitized construction.* And it's much more fun than to study blue prints, exploded views or technical explanations!

You make your own selection of components to suit your needs. Wide choice available plus variable ways of attaching inlet and outlet fittings. Meters can be changed from right to left-hand flow or left to right-hand flow to best suit piping arrangement. Additional functional accessories may be added without disturbing original unit or discarding parts already purchased. Ask nearest representative for this desk-top demonstration in your own office. A. O. Smith Corporation, Meter Division, 5715 Smithway St., Los Angeles 22, California.

A.O. Smithway

A.O.Smith

METER DIVISION

Factories: 5715 Smithway St., Los Angeles 22, Calif. • P.O. Box 500, Succasunna, N.J. • Offices: New York 36, Chicago 7, Atlanta, Houston 20 • Canada—Toronto 12, Vancouver 1. International Division—Milwaukee 1, Wisconsin

ALL . . . .

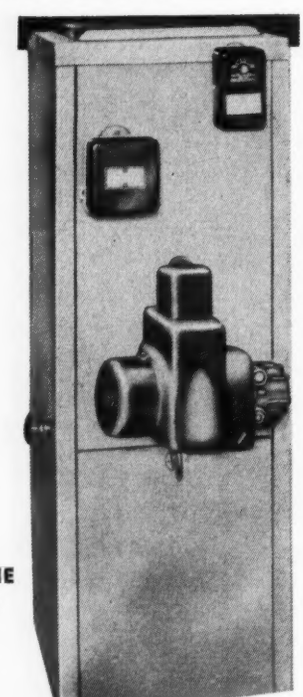
you have hoped for is yours in

ROTO-FLAME

WINTER AIR CONDITIONERS

- QUICK, EASY INSTALLATION
- QUALITY CONSTRUCTION—Special alloy steel fused into one piece for maximum resistance to heat and corrosion
- OUTSTANDING TROUBLE-FREE PERFORMANCE—85% efficiencies are the rule, not the exception
- EQUIPPED WITH ROTO-FLAME BURNERS, time-tested and time-proven
- HIGH BOY and suspended type models

Greatly increased production and engineering facilities now available to ROTO-FLAME dealers.



ROTO-FLAME High Boy Unit

ROTO-FLAME Boilers *for Steam and Hot Water*

A S M E Standard

Designed to exceed code requirements

ROTO-FLAME means good profits and enhanced reputation

Write today for full information

Oil Equipment LABORATORIES, Inc.

Bridge Street, Elizabeth, N. J.

College short courses, *sponsored by the National Warm Air Heating and Air Conditioning Association, provide students with experience gained by working out problems during classroom sessions. More than 100 men have registered for the short course to be held February 15 to 18 at the Oklahoma A & M College, Stillwater, Okla. Prof. R. R. Irwin of the College's Mechanical Engineering Dept. is in charge. From basic and advanced classes in warm air heating and advanced summer cooling, students will select the problems in heating or cooling which adapt themselves best to their background and future plans. The 4-day course will feature lectures by both industrial and college representatives, with each student receiving a complete library of 12 manuals prepared by the Association, along with work sheets and calculating forms.*

Stackpole. His major development of the theme had to do with various aspects of dealer advertising. This referred not only to newspaper and other periodical advertising but embraced the whole range of dealer publicity including personal solicitation to tell the story. Stackpole has a particularly effective and interesting style of humor which brought a lot of favorable comment from the membership.

In his discussion considerable emphasis was placed on the possibilities in open-end mortgages for adding heating plants to old homes. He urged the dealers to sell the idea to the bankers. He explained the advantages of organized selling crews to work over a community or a city and to be persistent in making calls. He gave some figures from his experience showing, for example, that 81% of all sales are closed after the fourth call.

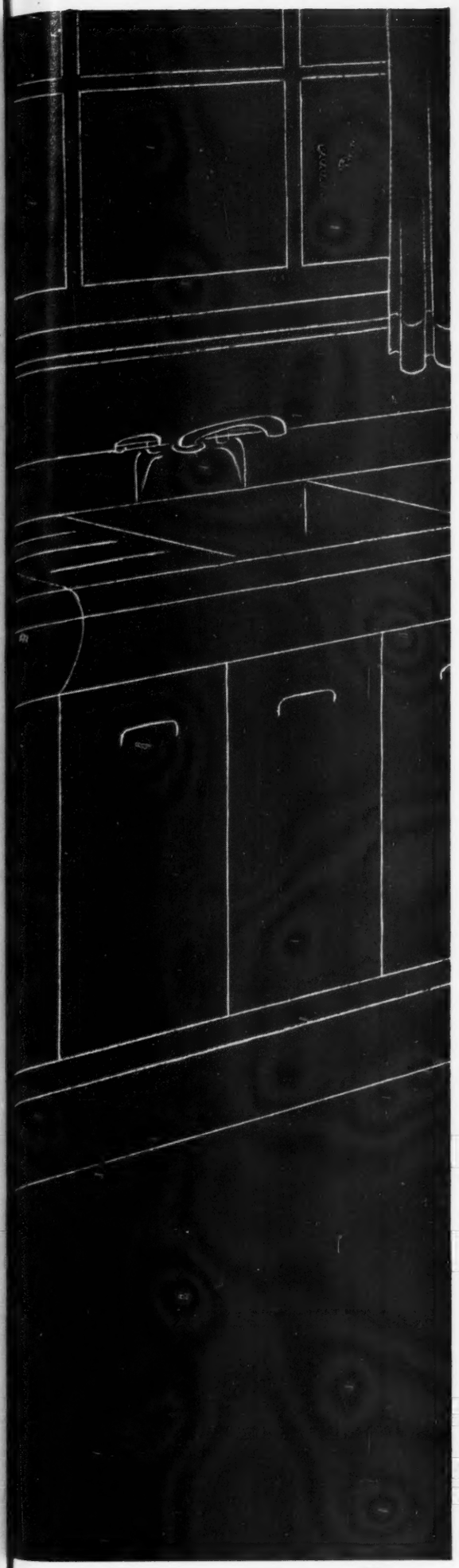
Another outstanding speaker was R. H. Collacott, official of Standard Oil Company of Ohio, who talked on the "Economic Aims of the Association." Collacott praised the group for its high level of activity as demonstrated by the things he saw at the convention. He remarked that while a trade association is helpful to any industry that it is particularly so where the industry is dynamic and growing. He mentioned that no trade association could possibly sustain interest in a dying industry. In his remarks about public policy on successful enterprise he mentioned, "Public interest and maximum profits definitely do not conflict."

In presiding at the first session of the convention W. D. Redrup, retiring President, brought some interesting figures on the groups' activities. The Association has a staff of 17 persons, it has an annual budget of $225,000, and it has a cash bank balance of $281,000. During 1953 approximately 55,000 of its educational manuals were sold to manufacturers and dealers.

The membership of the association now includes 130 manufacturers, 141 jobbers, and 3074 dealers. Last year the Association gave prizes to the salesmen of manufacturer members for recruiting new dealer members.

Leonard G. Haeger, National Association of Home Builders, Washington, D. C., brought a lot of useful statistics. He mentioned that his association had 27,500 members and included builders of all kinds. Haeger believes that home building is rapidly moving out of the crafts into a modern industry. He pointed out that the carpenter type of builder represents 81% of all builders in number but accounts of only 22% of the houses. He then mentioned that new home building

(Please turn to page 150)



NEW PRODUCT

COMPLETE NEW HEATING UNIT

combines "kitchen appliance" beauty with "code boiler" dependability . . . offers easier installation and servicing

Spencer now offers a new ready-to-install oil-fired heating unit called the Suburban. This unit combines time-tested Spencer efficiency and durability with a new kind of beauty and ease of installation. It's equipped to supply year-round hot water, conforms to ASME and SBI codes, offers several unique advantages.

FITS IN ANYWHERE—the Spencer Suburban *actually rivals modern kitchen appliances* in adding beauty to kitchens or utility rooms. All parts are completely enclosed in a gleaming white enamel beauty jacket. Connections are easily concealed. And because the Suburban is completely insulated, it can be placed flush against metal appliances or wooden cabinets, or even set directly on a wooden floor. No special base is necessary.

EASIER TO INSTALL—just hook up electrical connections, oil and water lines, and smoke pipe. That's all.

EASIER TO SERVICE AND CLEAN—readily removed plate on top makes all fire tubes easily accessible. No need to disturb jacket or smoke pipe when cleaning this unit. Controls and all working parts can be reached from front for easier servicing.

This is the newest member of Spencer's Complete Line.

510 SQ. FT. NET SBI WATER RATING
DIMENSIONS—ONLY 21½" x 32½" X 56"

SPENCER
HEATER
LYCOMING DIVISION
WILLIAMSPORT AVCO PENNSYLVANIA

Spencer Heaters, Dept. FO-1-4, Lycoming Division
AVCO Manufacturing Corp., Williamsport, Pennsylvania

Dear Sirs: Please send additional information, including full specifications, on the new Spencer Suburban to:

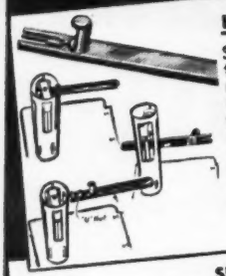
Name_____ Position_____

Company_____

Address_____

City_____ Zone_____ State_____

6 HYDROVALVE TOOLS TO SPEED OIL BURNER SERVICING!



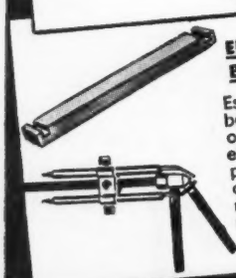
HELIX TOOL
Specially designed tool for simple removal and replacement of the helix in the MH-RA-117 controls. Eliminates the troublesome Helix servicing— because it holds the hard-to-get-at "U" nut. **$1.25**

SEAL WRENCH
The special nut on the Sunstrand seal can be speedily removed and replaced by using this specially designed wrench. Ruggedly constructed and 12" long, it allows a firm grip, making seal replacements extremely easy. **$4.50**

QUICK-TEST GAUGE ADAPTOR
No valves to remove; simply remove socket-head screw from any air bleeder valve, screw in "QUICK-TEST GAUGE ADAPTOR" with pressure gauge attached. (Features an "O" ring packing and turns 180° for all-position reading). **$1.45**

FUEL-UNIT JIG
Holds fuel-units at any angle in a vise without possibility of damage. Allows the use of long wrenches to remove stubborn and corroded nozzle ports and other pump parts. Can be adapted for use on a service truck. **$6.50**

BELLOWS WRENCH
Every serviceman needs a "Detroit Bellows Wrench" for easy and faster servicing. This sturdy wrench features an all-position 10" "T" handle, positioned by turning the knurled pilot, which also helps in loosening stubborn retainer nuts. **$3.60**



ELECTRODE BENDING TOOLS
Essential for accurate bending and setting of 3/32 and 1/8 electrode tips . . . prevents expensive ceramic breakage . . . made of heat treated, rustproof steel.
$1.25 pair

See your jobber or write direct!

HYDROVALVE CO.
1319 Utica Ave.• B'klyn 3, N.Y.

Baltimore imposes Tax on all industrial Fuels

IN SPITE OF cooperative efforts of national organizations and local oilheating dealers, Baltimore has become the first city in the nation to impose a tax on fuels.

The levy is aimed at industry, and places a ½¢ per gallon tax on all No. 4, 5 and 6 fueloil delivered within the city limits and a ¾¢ per gallon tax on No. 2 fueloil used in manufacturing, assembling, processing and refining.

Kerosene and No. 1 fueloil are exempt from the tax as are fuels sold to transport facilities, non-profit organizations, state and national governmental departments.

Under the same law, liquefied petroleum gas, natural gas, electricity, steam and telephone service sold to industry are taxed at the rate of 7½ percent of the gross sales price. Anthracite and bituminous coal are taxed 60 cents per ton.

According to S. K. Yarrington, executive secretary, Oil Heat Association of Maryland, the ordinance became effective January 1, 1954. The tax will be passed directly on to the consumer.

❖

Petroleum Production hits new Highs in 1953

DOMESTIC DEMAND for petroleum products set another all-time high in 1953 according to an American Petroleum Institute, New York, N. Y., summary of the oil industry's operations over the past 12 months. Institute president Frank M. Porter said the increase amounted to an estimated 4.6%. This is the 11th consecutive year that domestic demand has exceeded that of the preceding year.

Production of distillate fueloil amounted to 532 million barrels—an increase of 11 million barrels. Production of residual fueloil declined slightly from 455 million barrels in 1952 to 446 million barrels in 1953. Total production for both types of fueloil went up to 979 million barrels from 976 million barrels establishing another record high.

Porter said that 65% of the industry's crude oil inventories, 40% of its light products and 42% of its residual fueloil are unavailable for sale because pipelines, transportation and other facilities must be kept filled and moving constantly if the products are to be available where and when needed. The value of crude oil and the four major products tied up constantly in this process is in excess of one billion dollars, he said.

All along the line, oil men compiled a variety of new operating and preparedness records in 1953.

Production of liquid petroleum, natural gas and oil products surpassed all previous peaks. Refining capacity was expanded substantially, to meet increased demand and to provide a reserve cushion for national defense. The number of wells drilled during the year should top 49,000, an increase of 4,000 over 1952. Of these, more than one-third were dry holes—ventures in which the bulk of the investment was lost.

The API president said domestic de-

Fueloil produced in U. S. Refineries

(Barrels)

Year	*Distillate Fueloil*	*Residual Fueloil*	*Total Fueloil*
1939	161,746,000	305,944,000	467,690,000
1940	183,304,000	316,221,000	499,525,000
1941	189,177,000	342,367,000	531,544,000
1942	196,714,000	358,901,000	555,615,000
1943	211,516,000	417,306,000	628,822,000
1944	239,152,000	461,455,000	700,607,000
1945	249,224,000	469,492,000	718,716,000
1946	287,896,000	431,364,000	719,260,000
1947	312,173,000	447,795,000	759,968,000
1948	380,700,000	479,988,000	860,688,000
1949	340,825,000	424,909,000	765,734,000
1950	398,912,000	425,217,000	824,129,000
1951	475,801,000	469,377,000	945,178,000
1952	521,264,000	454,784,000	976,048,000
1953*	532,600,000	446,200,000	978,800,000

*Estimated. Authority: Bureau of Mines.

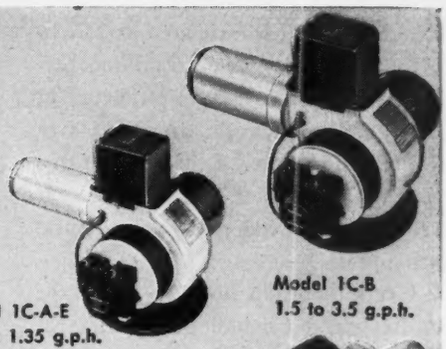
Wherever You Need BURNERS of BETTER QUALITY for BETTER PERFORMANCE

CHOOSE SUN-RAY

Way ahead with extra values

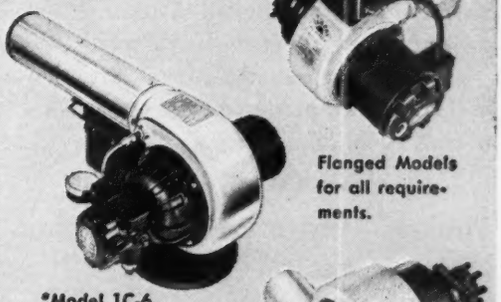
FOR EVERY HEATING NEED FROM 0.5 TO 25 G.P.H.

*Model S Burner with special aerodynamically designed housing for famous fuel saving "Shell" Combustion Head; 0.7 to 2 g.p.h.



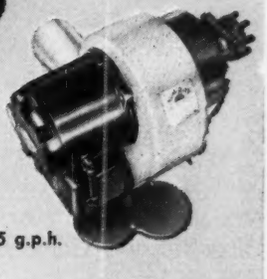
Model 1C-A-E
0.5 to 1.35 g.p.h.
Model 1C-A
0.75 to 2 g.p.h.

Model 1C-B
1.5 to 3.5 g.p.h.



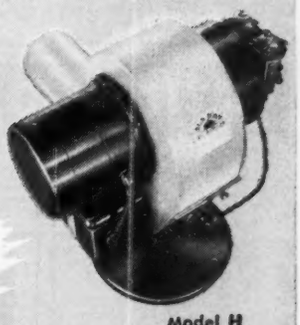
Flanged Models for all requirements.

*Model 1C-6
3 to 6.5 g.p.h.



Model G
0.75 to 2.5 g.p.h.

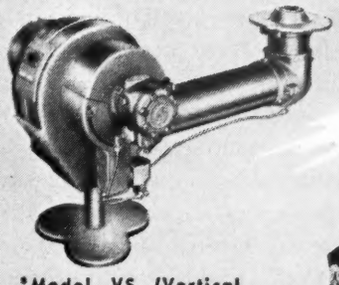
*Model S-1, with special aerodynamically designed housing for famous fuel saving "Shell" Combustion Head; 2 to 3 g.p.h. Model S-2, 3 to 6 g.p.h.



Model H
2 to 6 g.p.h.

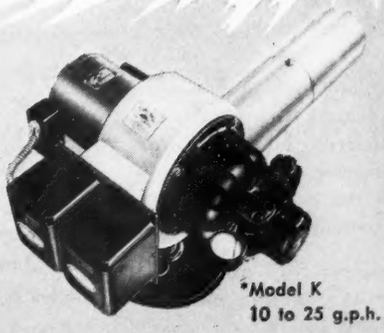
SUN-RAY FULLY AUTOMATIC OIL BURNERS

FAMOUS THE WORLD OVER FOR QUALITY AND ECONOMY

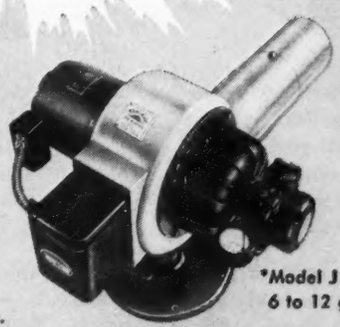


*Model VS (Vertical Flame), with special aerodynamically designed housing for famous fuel saving "Shell" Combustion Head; 0.7 to 2 g.p.h. Model VS-1, 2 to 3 g.p.h.

Model H-2
5 to 8 g.p.h



*Model K
10 to 25 g.p.h.



*Model J
6 to 12 g.p.h.

*Delayed action oil valve mounted and wired. Available on other models as an extra. Built-in electronic controls optional on all models.

Inquiries invited from boiler and furnace manufacturers

SUN-RAY BURNER MANUFACTURING CORPORATION

139-22 Queens Boulevard, Jamaica 2, New York

mand for 1953 is estimated at 2,781,000,000 barrels—up 116 million barrels. Domestic supply is estimated at 2,608,000,000 barrels, an increase of 94 million barrels. Of this amount two billion, 363 million barrels represent crude oil and the remainder natural gas liquids.

Crude oil production throughout the entire world (including estimates for Russia and the satellite states) was estimated at four billion, 755 million barrels. Of this, the United States accounted for 49.7% of the world total —the first time that the rest of the world combined produced more crude oil than American oil men.

❖

Timken Dealer sells guaranteed Savings

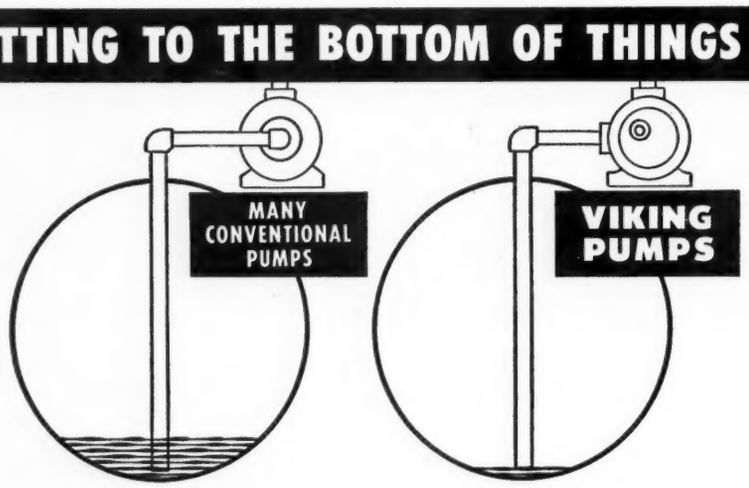
DURING NOVEMBER Universal Utilities, Inc., Timken dealer in Great Neck, N. Y., launched a campaign which offered $500 in cash to any purchaser "if our Timken installation does not save you 25% on your fueloil bill." Perry Morris of Universal says that results to date have been good, in fact, "We have sold every lead that answered our advertisements on the offer."

Morris explained that the number of replies to the advertising was low when compared with campaigns run at other times of the year but, considering the season and the natural reluctance for people to change their heating systems in cold weather, he feels the success of the campaign is gratifying.

Briefly, a full page advertisement in the New York *Sunday News* of November 22, offered to homeowners in Nassau County the services of a trained heating engineer to make a heating system survey. "If he finds your present oilburner wasteful and inefficient and we replace it with a Timken burner, we will guarantee in writing to save you a minimum of 25% of your fueloil bills and if we don't do this, we will give you $500 in cash—no strings attached."

All installations made under this offer are fired with Timken wall flame burners and each job is tested with a CO_2 analyzer before and after installation.

GETTING TO THE BOTTOM OF THINGS



The difference to you between profit and loss can depend upon the simple, positive action of Viking Rotary Pumps. Their fast, thorough stripping action can mean that you get all you pay for when emptying barrels, tanks and other containers instead of leaving a part of each load. Where many other pumps fail, efficient stripping is possible with Vikings because of the suction lift created by our famous Viking "gear-within-a-gear" pumping principle.

Whether the liquid you want to pump is thick or thin, you will pump more . . . faster with a Viking. What is your pumping problem? Send it along today and ask for bulletin 1507EE.

VIKING PUMP COMPANY, Cedar Falls, Iowa

THE ORIGINAL "GEAR-WITHIN-A-GEAR" ROTARY PUMP

Housing Starts decline slightly during November

ACCORDING TO preliminary estimates of the U. S. Labor Department's Bureau of Labor Statistics, nonfarm housing starts declined less than is seasonally expected in November. The decline was in privately owned housing and reflected some decrease in all sections of the country except the Pacific States, where volume held the same as in October.

Although starts of privately owned housing were down by almost 11% last month, the decline was less than usual for November. In each of the three previous years the October-November drop amounted to 18%.

The million mark for new homes in 1953 was reached in November, with 1,031,300 new nonfarm dwelling units begun during the first 11 months, compared to 1,055,500 in the same period in 1952. The downward drift which started last May has been gradual so that the total thus far (997,100 units) was almost equal to the private volume for the same period in 1952—the second best housing year on record.

Publicly owned housing (34,200 units) was down by more than a third from the January-November, 1952 figure.

❖

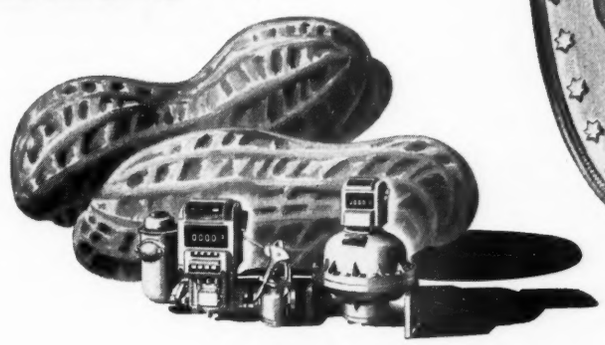
Jersey Standard elects E. Holman, M. J. Rathbone

EUGENE HOLMAN has been elected chairman of the board of directors and M. J. Rathbone president and vice-chairman of the Executive Committee of Standard Oil Co. (New Jersey).

The appointments, which became effective January 1, were accompanied by the announcement that Chester Smith, vice-president and director, had been elected to the Executive Committee; and that Lloyd Elliot had been elected to succeed Orville Harden as a vice-president and director.

Holman succeeds Frank W. Abrams who recently retired. A native of San Angelo, Texas, Holman joined Humble Oil & Refining Co., a Jersey affiliate in 1919 as a geologist. He transferred to New York City in 1929 to become assistant to a vice-president in charge of crude oil production. He was

THE COST OF A GOOD METER IS PEANUTS . . .

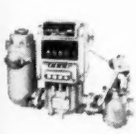


COMPARED WITH THE MONEY IT SAVES

One of your tank truck meters may be making 2800 fuel oil sales and handling $75,000 of your money every year! Your bulk plant meters are capable of delivering their own value in gasoline in less than half an hour! If a meter's accuracy slips only a fraction between tests, you can't afford the losses you'll have. Neither can you afford to test the meter all the time.

Maintenance costs are important, too, for every dollar spent on repairs means you lose the profits on *many* gallons sold. Sustained meter accuracy and low maintenance quickly outweigh all other considerations such as differences in initial price and pumping costs. Insist on the finest meters you can buy . . . Red Seals . . . for all your trucks and loading racks.

Want proof of sustained accuracy? Read what these Red Seal users say:



"I drove a tank truck with a Red Seal meter for six years, put 13,000,000 gallons through the meter, without a single repair bill," states a man in Texas.

Another Red Seal user in New Jersey asked Neptune to modernize six 3" meters that had delivered more than 60,000,000 gallons apiece. Each measuring chamber needed only two inexpensive replacement parts.

"We feel these meters paid for themselves within the first six months," says a Minnesota oil company which has Red Seal Print-O-Meters in four bulk plants.

neptune
RED SEAL METERS

Accuracy You Can Bank On →

NEPTUNE METER COMPANY

50 WEST 50th STREET • NEW YORK 20, N. Y.

Branch Offices:

ATLANTA • BOSTON • CHICAGO • DALLAS • DENVER
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IN CANADA: **NEPTUNE METERS LTD.,**
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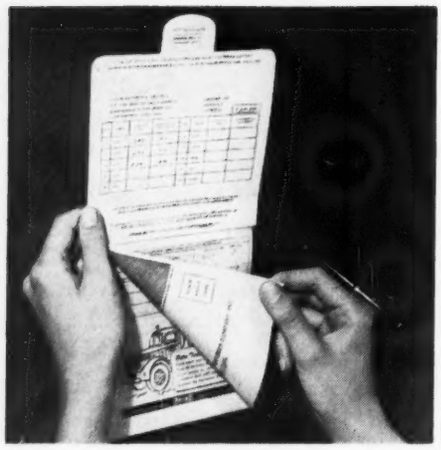

INSTALVELOPE

ENDS BUDGET ACCOUNT HEADACHES FOR YOU— AND YOUR CUSTOMERS!

Speeds Budget Collections:

Payment Coupons with envelope attached are bound in Customer's Payment Record Book and provide immediate and positive identification of account and excellent posting medium.

Experience has proved use:

1. Increases payment on due date by average of 3 days per payment.
2. All information available for crediting account.
3. Eliminates correspondence and errors.
4. Customers like courtesy, efficiency and convenience.

Advertises Your Products:

Provides powerful and economical means of advertising your other products and services to a known and complete "captive" audience at pre-determined intervals throughout the year.

Thousands of Instalvelopes in use from coast to coast!

Write or wire us for sample Book and complete information:

EFFECTIVE TOOLS FOR EFFECTIVE MANAGEMENT

ETEM

WASSELL ORGANIZATION, INC.

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Please send me without obligation, sample book and complete information.

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president and director of Creole Petroleum Corp. and Lago Petroleum Corp., Venezuelan affiliates of Jersey Standard.

Named a director of Jersey Standard in 1940, Holman was elected a vice president in 1942, became president of the company in 1944 and chairman of the executive committee in 1946.

Rathbone joined the organization 32 years ago as an engineer at the Baton Rouge refinery of Standard Oil Co. of Louisiana, and later became president of Louisiana Standard. In 1944 when that company was merged with Esso, he came to New York as president of Esso Standard, a post he held until he moved to the parent company as a director in 1949.

Frank W. Abrams had spent 42 years with Jersey Standard and affiliates and became Chairman of the Board of Directors in 1946. Before that he had been president of Esso Standard Oil Co. He is a director of the Council for Financial Aid to Education, which he helped organize. In 1952 he was elected to the Board of Trustees of the Ford Foundation. He is also a director of the Sloan Foundation and a trustee of the Industrial Relations Counselors.

❖

Space Sales for burner Show now ahead of 1952

DISPLAY SPACE reserved by exhibitors for the oilburner show to be held May 16-20, 1954 in Philadelphia are running 10% ahead of reservations made at the same date for the 1952 show. The exposition, sponsored by the Oil-Heat Institute of America, Inc., "is now 78% sold," according to R. H. L. Becker, managing director, "and additional reservations for space are coming in daily."

The exposition takes place concurrently with the 32d OHI annual convention, with both located in the Commercial Museum, Philadelphia. M. J. Donahue, Fluid Heat Div., who is chairman of the Exposition-Convention Committee, explains that this will save time and expense for both exhibitors and dealers who attend and adds, "The Convention sessions will be in the morning so that everyone will be free to visit the exposition the rest of the day." The Exposition has been named National Indoor Comfort Exposition.

The committee met in Philadelphia on December 9 to develop advertising and publicity plans, along with a convention program, and later in the day consulted with the Oil Industry Information Committee of the American Petroleum Institute. Even though the name for the exposition was chosen to encompass the over-all theme of cooling and heating, advance publicity and announcements are to emphasize the oilheating aspect of the show and the convention program.

A formal report of the Exposition-Convention committee is to be given the OHI Board of Directors during its January 22 luncheon meeting at the Edgewater Beach Hotel, Chicago. The meeting is an open one to which all OHI members are invited.

❖

Airconditioner Shipments show Increase of 194%

SHIPMENTS of room airconditioners for 1953 were approximately 1,075,000 as compared to 365,451 units last year. This is an increase of 194%, says George S. Jones, Jr., managing director of the Air-Conditioning and Refrigeration Institute, Washington, D. C.

Although room conditioners have been sold for more than 20 years almost 90% have been installed in the last five years. In 1946 manufacturers shipped 16,409 window units and 13,426 console (floor type) conditioners. In 1953 the breakdown will be approximately 1,055,000 window units and 20,000 of the floor type.

Shipment figures compiled by the Bureau of Census for the past few years are as follows:

Year	*Shipments*
1946	29,835
1947	42,904
1948	73,638
1949	89,320
1950	200,911
1951	237,490
1952	365,451
1953	1,075,000

25 YEARS

of research paves the way

THIS YEAR the Shell Oil Burner Testing Laboratory at Sewaren, New Jersey, celebrates its 25th anniversary. Reviewing some of the major "firsts" to come out of Sewaren over the years:

. . . new techniques to improve fuel oil quality and oil heat economy.

. . . release of the Shell-developed "Combustion Head" to the oil burner industry.

. . . The Shell "Smoke Meter," the first simple, reliable device for measuring flue gas smoke and its effect on heating efficiency.

. . . introduction of FOA-5X, the fuel oil additive to prevent clogging of oil burner filter screens.

. . . automatic condensate measuring apparatus for determining domestic boiler efficiency under actual service conditions.

. . . and most recently, Shell Sonitor, the rust inhibitor that gives oil storage tanks long-term protection against corrosion.

To meet the ever-expanding needs of the oil-heat industry, research at Sewaren continues. The first twenty-five years have paved the way for even greater contributions in the future.

SHELL

SHELL OIL COMPANY

THESE TWO GREAT
TIME & LABOR
SAVERS
ARE A *MUST* FOR
EVERY
SERVICEMAN
AND DRIVER
•
CUT NUISANCE
SERVICE CALLS
25%

NEUTRODA

- STOPS ODORS DUE TO LEAKS & SPILLS
- ONLY KNOWN PRODUCT WHICH NEUTRALIZES OIL BY CHEMICALLY INHIBITING VAPORIZATION THUS ELIMINATING ODOR
- JUST SPRINKLE IT ON! A LITTLE GOES A LONG WAY

On Hot Air Installations

- A light sprinkling of Neutroda on the air filters kills all fuel oil odors that have penetrated to rooms thru ducts, in 2 to 5 minutes
- A light sprinkling of Neutroda at beginning of heating season when unit is started up destroys mildew odors—prevents call-backs

TANKIT

STOPS
FUEL OIL TANK
LEAKS

- Cleaner, faster, easier—stops leak in 2 minutes.
- Push patch into position, even on low-legged or twin tanks.
- Replace tank at your convenience.
- Pressure can even be applied at angle.
- No pump-outs, no cellar damage, no time wasted, no lack of heat, no customer inconvenience.
- Same patch can be re-used indefinitely.
- 2 sizes—Junior for small leaks, Senior for Porous Areas up to 18 sq. in.

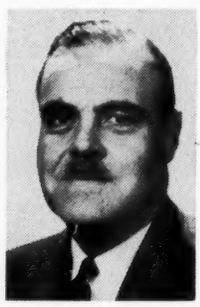
BOTH PRODUCTS AVAILABLE at your Supply House Only. Or write for full information and name of nearest distributor.

THE TANKIT CO
174 GOLDSMITH AVE. NEWARK 8, N. J.

Sweatt is M-H Chairman; Wishart named President

ON DECEMBER 1 Harold W. Sweatt, president of Minneapolis-Honeywell Regulator Co. since 1934, was elected chairman of the board, succeeding Mark C. Honeywell, named honorary chairman. Paul B. Wishart, vice-president and general manager, was named president, succeeding Sweatt.

Sweatt



Wishart

Simultaneously two other officers were elected directors, enlarging the board's membership to ten: Tom McDonald, vice-president in charge of sales; A. M. Wilson, vice-president in charge of the Aeronautical Division.

McDonald

The top-level changes in management coincided with the retirement of five officials under the company's executive retirement plan established in 1943. In addition to Honeywell, the retiring officials are: W. L. Huff, director, executive vice-president and former treasurer, and like Honeywell an executive who has been a member of Honeywell's top management since the firm was organized under its present corporate structure in 1927; R. P. Brown, vice-president and chairman of the board of the Industrial Division in Philadelphia; George A. DuToit, vice-president in charge of manufacturing; L. Morton Morley, vice-president and formerly in charge of Industrial Division sales.

Honeywell, Huff and Brown are continuing as directors.

Wishart, at 55, becomes the fourth president of Honeywell in the firm's 68-year history. As vice-president in charge of manufacturing he directed

Sparking
the Nation's Oil Burners
for 20 years
DIELECTRIC
Ignition Electrodes

First- to employ steatite insulation, unequalled for oil burner service — first in research with special electrode metals.

First- with automatic, precision production in hundreds of designs for uniform, dependable service at low prices.

First- to develop standard assemblies applicable to scores of makes of oil burners.

First- with service on new factory designs — always abreast of manufacturers' engineering — first with a complete line of cables, harness, bus bars and hardware accessories.

Today- as through 20 years of pioneering development, constantly improved manufacturing techniques and unparalleled service, the DIELECTRIC name stands for uncompromising standards of excellence in oil burner ignition electrodes for every domestic and industrial application.

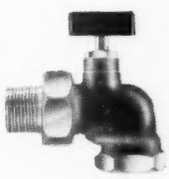
DIELECTRIC Ignition Electrodes are available in standard types, and in special sizes and shapes — all with full Underwriters' approval. Cable assemblies and bus bars for transformer-to-electrode layouts furnished for any burner hook-up. Consult us freely about your ignition electrode problems. DIELECTRIC'S experience and facilities are at your service.

DIELECTRIC
PRODUCTS CO., Inc.
125 Virginia Ave., Jersey City 5, N. J.

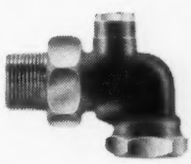
COMPLETE HOT WATER LINE

all this...and radiation too!

Dunham Circulators. Single spring motor-pump coupling eliminates troublesome service requirements. Field replaceable carbon rotary seals. Extra-large oil reservoir. Only well-known motors used. Two-bolt flange simplifies installation.



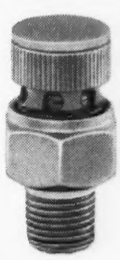
Dunham Circulator Valves. Exclusive extra-large water flow area reduces friction and pump load. Valve fully opens or closes with ¼ handle turn. Valves are self-cleaning.



Dunham Balancing Elbows and Fittings. Free water flow area larger than other balancing fittings; reduce friction and pump load. *Sloping valve seat* provides V-shaped opening for *more accurate balancing* than usual vertical seat types.

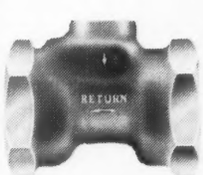
Dunham Pressure Relief Valves. Diaphragm type. Spring chamber sealed against discharge water. No guides on discharge side to stick or jam. Factory set at 30 lb. pressure.

Dunham Pressure Reducing Valves. Built-in strainer; extra-large diaphragm. Special composition disc prevents chattering. Factory set at 12 lb. Adjustable. Combination relief and reducing valve available.

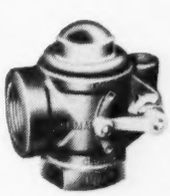


Dunham Expansion Type Air Vent. Cannot get out of order! Automatic venting. No adjustments needed. Can be manually shut off. *Not necessary to drain system to replace disc.* Maximum working pressure: 50 p.s.i.

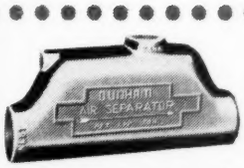
Dunham Float Type Air Vent. Built-in siphon prevents "spitting," eliminates need for drain tube. Can be completely disassembled easily and quickly. Maximum working pressure: 35 p.s.i.



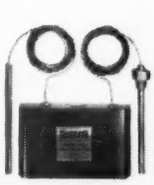
Dunham Flow Divertor Fittings. Assure proper hot water flow through all radiation units regardless of location. Only one fitting normally needed for each unit of radiation whether above or below main. All brass; thread or sweat connections.



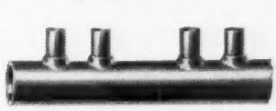
Dunham Flow Control Valves. Completely automatic. No adjustment needed for winter-summer operation. Easy to clean without breaking pipe connections or removing valve mechanism.



Dunham Air Separator. Performs dual function: passes air from system to expansion tank and prevents re-entry into system; vents remaining excess air to atmosphere. Heavy one-piece construction.



Dunham Vari-Flow Controls. Fully automatic indoor-outdoor temperature control for all types of hot water heating systems. Balances heat output with heat demand created by outdoor weather. Eliminates indoor thermostat.



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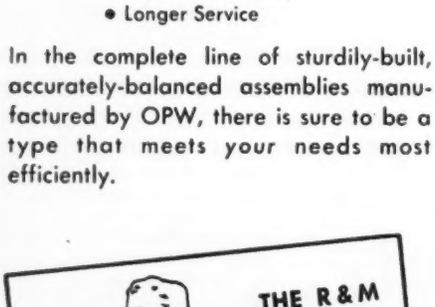
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the company's expanding Minneapolis postwar production operations and about a year ago was named to a new top managerial post, vice-president and general manager. Since then he has carried out many of the duties formerly handled by Harold Sweatt as president and C. B. Sweatt and W. L. Huff as executive vice-presidents.

A native of Missouri and a U. S. Naval Academy graduate, Wishart was seven years in naval service and then spent many years in various assignments in the automobile industry. He joined Honeywell in 1942, became superintendent for manufacturing in 1943, factory manager in 1945, vice president in charge of manufacturing in 1946.

❖

Journal of Commerce covers high Estimates for Fueloil

THE COLUMN "Petroleum Products" by W. M. Jablonski in the November 25 *New York Journal of Commerce* contains a discussion of "Overestimating heating oil Demand." It cites the conclusion of a survey made by a major oil company, "The oil industry generally tends to overestimate its distillate heating oil requirements—a tendency that may have increasingly serious repercussions in the future."

The chief causes for this, the study developed, is that the industry takes "inadequate account" of several factors. One of these is the definite upward trend in winter temperatures in a number of areas, where normal weather estimates used by industry are too cold. Miss Jablonski points out that the normal weather basis is merely a long-term arithmetic means of actual weather conditions and shows no trend. "Yet studies of chief heating oil consuming centers show that such key cities as New York, Boston, Philadelphia, Detroit and Indianapolis are undergoing a marked milder trend in heating weather. (No trend has been found, however, for such areas as Chicago, St. Louis and Minneapolis.)"

Further, better home construction, smaller homes and increased burner efficiency have combined to produce "a decided downward trend in the average oil consumption per burner." Actually the study indicated: "It amounts to approximately one-tenth of a barrel less oil consumption each successive year by the average burner for each 1,000 degree-days temperature." Thus, for an average 5,000 degree-day winter, there would be some 3½ million barrels less oil consumed successively each year by the almost 7 million oilburners now in use.

It all adds up to the necessity for achieving more reliable methods of forecasting heating oil demand, the article concludes, because, "Every indication points to continued rapid growth of distillate oil demand for some years to come to an increasingly larger proportion of total oil demand." Then, because railroad dieselization is believed nearing saturation and growth of other non-heating distillates is tapering while heating oil use is rising steadily, the probabilities "point to greater, not lesser, seasonality in distillate demand."

❖

API says refining Capacity exceeds eight million Barrels

ON DECEMBER 31 the U. S. oil industry had operable refining capacity in excess of eight million barrels per day, according to a survey completed recently by the American Petroleum Institute. Operable refining capacity, an index of the industry's ability to process crude oil into consumer products, was estimated to total 8,079,000 barrels per day at year end, an increase of 494,000 barrels per day over capacity reported by API for December 31, 1952.

The survey also showed that the increase in operable refining capacity will continue in 1954 to 8,340,000 barrels per day by next September 30, representing a further increase of 261,100 barrels per day during the first three quarters of 1954.

Totals shown in the survey are exclusive of 21,000 barrels per day which were in need of major repairs and therefore not operable last September 30. Totals do include 203,000 barrels per day which were operable, though believed to be in the high cost marginal group and shut down on September 30.

Oilheating finishes strong

Dealers install 794,723 Burners and increase Number in Use to almost seven Millions

THE OILHEATING INDUSTRY'S third best year saw equipment sales fall just short of 800,000 burners and units, while the number of oilburners in use for domestic heating at the end of the year totaled almost 7 million.

Actually, there were 794,723 oilburners and units installed during 1953 for domestic heating, a 2.2% increase over 1952's sales of 777,604. Only sales in 1947 and 1950 surpassed last year's. Interestingly enough, the chart on page 54, listing "Domestic oilheating Sales, Burners and Units" by years, shows a direct relationship between the two peak years for oilheating sales.

The chart was worked up to demonstrate the pattern of sales for the past 13 years, including an average of pre-war sales between 1936 and 1940 of 229,700. Sales—actually installations of domestic oilheating equipment—during 1941 exceeded this average by a comfortable margin, but the next few years, naturally, recorded the drastic drops experienced during the war years. During 1946 sales of 492,593 registered what was up until that time the industry's biggest year, but 1947's total of 888,083 reflected the huge unsatisfied demand for oilheating that had built up during the war. And either directly or indirectly the impact of the large number of oilheating installations during 1947 was felt for the next three years.

The 888,083 installations represented such a great increase and added so dramatically to total fueloil users that supply difficulties resulted. There were no cases where fueloil could not be supplied but over-taxed transportation and supply facilities did produce some soft spots. As a result there were numerous statements in newspapers and magazines cautioning against adding further load to fueloil facilities so that 1948 sales fell to 455,245 burners and units.

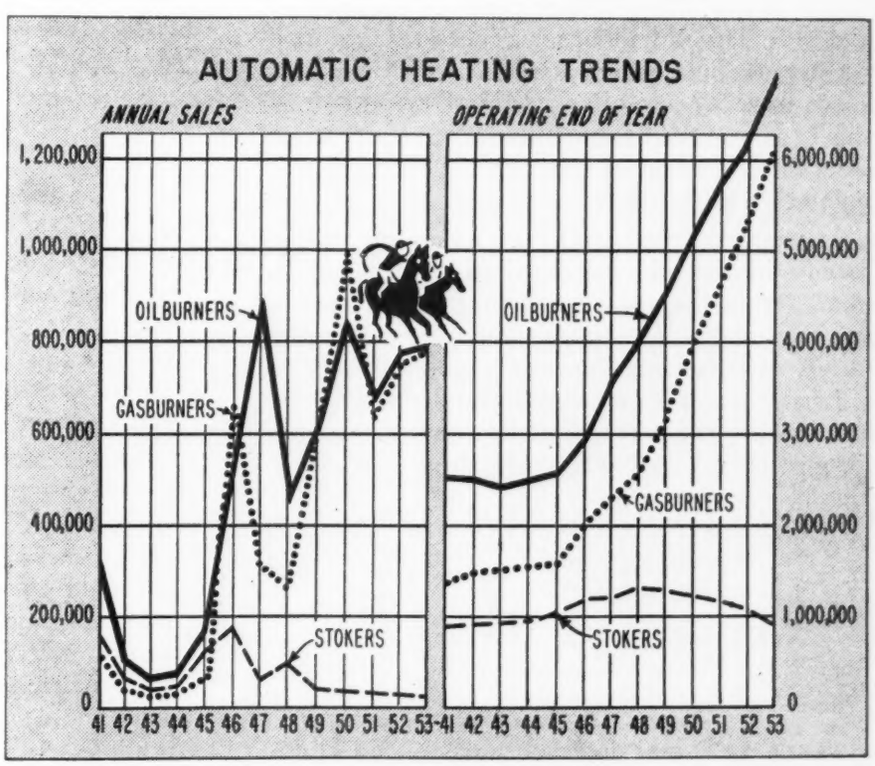
This was caused by a drop in public confidence in fueloil supply generated by scare publicity and while the supply picture improved materially during 1948 from normal industry expansion, this feel-

TABLE I

Automatic Heating Trends

	Total	% of Total Stoker	Oil-burners	Gas-burners
	ANNUAL SALES			
1941	652,591	28.0%	51.1%	20.9%
1942	225,041	35.1	44.2	20.6
1943	64,465	27.5	51.9	20.6
1944	102,028	31.0	48.9	20.1
1945	321,693	37.1	45.2	17.7
1946	1,336,316	13.5	37.0	49.5
1947	1,271,679	4.9	69.8	25.3
1948	803,222	9.5	56.7	33.8
1949	1,281,706	2.3	47.9	49.7
1950	1,857,180	1.[illegible]	45.6	53.3
1951	1,346,794	1.4	50.1	48.5
1952*	1,542,659	1.3	50.4	48.3
1953	1,589,217	0.9	50.0	49.1
	OPERATING AT END OF YEAR			
1941	4,514,627	17.8%	53.2%	29.0%
1942	4,615,785	19.0	51.7	29.3
1943	4,633,755	19.3	51.3	29.4
1944	4,700,130	19.7	50.9	29.4
1945	4,979,775	20.7	50.5	28.8
1946	6,009,347	19.3	47.0	33.7
1947	7,133,709	16.6	51.2	32.2
1948	7,752,498	16.0	51.3	32.7
1949	8,845,695	14.0	50.8	35.2
1950	10,434,971	11.3	49.6	39.1
1951	11,506,701	9.8	49.6	40.6
1952*	12,758,149	8.5	49.7	41.8
1953	14,065,444	7.1	49.7	43.2

*Revised



ing did not reach consumer levels in time to compensate. Sales during 1949 showed a marked improvement and the total of 846,815 attained the following year marked the end of real or imagined fueloil supply difficulties.

The three years since 1950 have recorded the fifth, fourth and third largest sales in oilheating history and, continuing as they have the normal pattern of industry expansion, have laid away for good any thoughts of fueloil shortages.

In 1953 oilheating installations totaled 50.0% of all sales of automatic heating equipment, gas accounted for 49.1% of installations and the balance of 0.9% were equipped with coal stokers. Oil and gas then accounted for 99.1% of all automatic heating installations, a slight increase from 1952.

Sales of oilburners, gasburners and coal stokers in 1953 amounted to 1,589,217, up 3.0% from the 1952 total of 1,542,659. Installations during 1953 were: Oilburners, 794,723; gasburners, 780,000; stokers, 14,494. Oilburner sales increased 2.2% last year; gasburners were up 4.6%; stoker sales were down 24.9%.

TABLE 1 illustrates Automatic heating Trends during recent years, showing total number of sales each year, number in use at the end of each year and the percentage breakdown between the three fuels used for automatic firing.

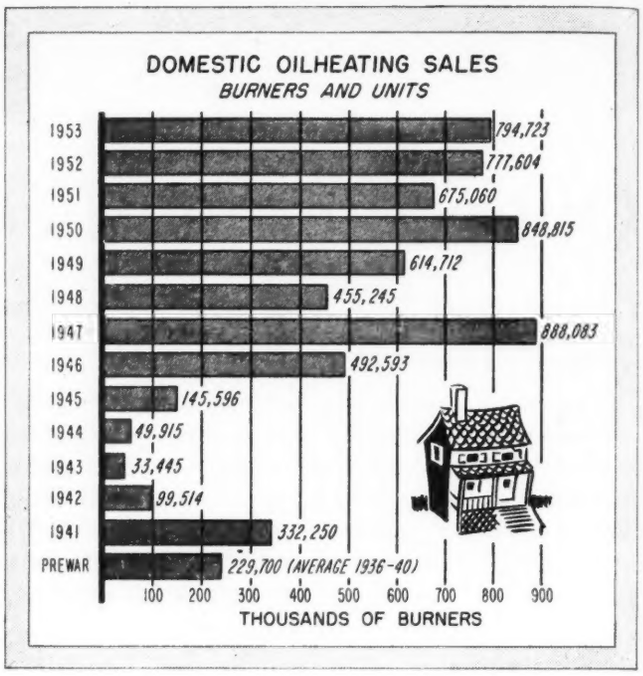
At the end of 1953 domestic oilburners and units in use had increased 10.2% to a total of 6,992,604. At the end of 1952 there had been 6,345,876 oilburners in use for residential heating. Based on sales of 794,723 burners and units, there was a net gain in number used of 646,728, representing 81.4% of total sales. Deducting 100,930 oilburners used to replace old oilburners gives a total of 693,793 new fueloil customers added during the year. There were 47,065 oilburners lost to other fuels which reduced the net gain in users to the figure of 646,728. Of the losses to other fuels 43,218 were replaced by gasburners.

At year end the number of automatic heating systems in use had increased to 14,065,444, up 10.2% from the 12,758,149 that were operating on December 31, 1952. Oilburners represent 49.7% of these installations; 43.2% are gasfired and 7.1% are equipped with coal stokers. The tabulation shows the percentage of homes heated with oil, gas or stokers for the past three years:

Operating 12/31/53		*1953 %*	*1952* %*	*1951 %*
6,992,604	Oilburners	49.7	49.7	49.6
6,073,300	Gasburners	43.2	41.8	40.6
999,540	Stokers	7.1	8.5	9.8
14,065,444				

*Revised

TABLE 2, "Total domestic Burners and Units," tabulates annual sales since 1930, including retail



and factory values of sales. In general, retail prices during 1953 registered slight declines, with factory prices on conversion burners dropping slightly, but showing slight advances in wholesale prices for units. Conversion burner retail prices dropped 1.9% to $368; factory prices were down 5.1% to $112. Factory-assembled boiler-burner units sold for $710 installed, a decrease of 8.4%, but the dealer paid manufacturers $391, an increase of 1.0%. Integral furnace-burner units were purchased by homeowners for $638 during 1953, 1.6% less than they paid in 1952, while dealers paid factory prices of $357 on the average, up 8.2%. All of these prices are national averages based upon total sales.

Oilburner Types

An analysis of oilburner sales by types during 1953 reveals very little change from 1952. Last year 76.5% of all burners sold were high pressure atomizing models, a total of 607,963, virtually the same as the 76.6% of burner sales in 1952 which involved this type of burner. High pressure gun burners then have retained their traditional position of accounting for 70% or more of burner sales.

Low pressure oilburners represented 9.8% of sales during 1953, a slight drop from the previous year when 10.4% of burners sold were low pressure models. Vertical rotaries gained somewhat, moving up to 11.0% of sales from 10.2% in 1952 and vaporizing burners remained virtually unchanged at 2.7%. During 1953 there were 77,883 low pressure burners installed, 87,419 vertical rotaries and 21,458 vaporizing oilburners, exclusive of those used in floor furnaces and other space heaters.

Listed below is a breakdown of burner sales by types for the past two years, with an average of the five pre-war years included for comparison.

1953 No.	*1953* %		*1952* %	*Prewar Avg.* %
607,963	76.5	High pres.	76.6	71.7
77,883	9.8	Low pres.	10.4	6.2
87,419	11.0	Vert. rot.	10.2	11.0
21,458	2.7	Vaporizing	2.8	10.8

Average retail and wholesale prices for high pressure, low pressure and vertical rotary oilburners are shown below. With one exception, these prices were lower than those charged in 1952. To illustrate, retail prices of high pressure atomizing oilburners dropped 2% to $345; low pressure atomizing burners were installed during 1953 for a price of $390, a decrease of 6.7% from 1952 levels; vertical rotaries, on the other hand, registered the only increase, up 5.5% to $455.

All three types were purchased by dealers for less than they had paid in 1952. High pressure atomizing burners dropped 2.8% to $103; low pressure models showed the largest dip, 5.3% to $160; vertical rotaries when purchased at wholesale cost $150 or 2% less than they did in the previous year.

Both retail and wholesale prices compared in the table are weighted national averages.

RETAIL *1953*	RETAIL *1952*		WHOLESALE *1953*	WHOLESALE *1952*
$345	$352	High pres.	$103	$106
390	418*	Low pres.	160	169
455	431	Vert. rot.	150	153

*Revised

TABLE 2

Total Domestic Burners and Units

Sales	*Retail Value*	*Factory Value*	*Year*	*No. in Use (End of Year)*
126,400	.....	.....	1930	648,500
104,000	.....	.....	1931	747,300
89,200	.....	.....	1932	831,120
88,600	.....	.....	1933	914,280
108,290	.....	.....	1934	1,012,870
150,510	$55,342,500	.....	1935	1,152,125
220,075	74,054,700	.....	1936	1,340,675
210,740	69,265,100	$22,238,200	1937	1,530,545
179,360	54,583,900	18,292,900	1938	1,667,745
236,140	66,520,400	23,352,200	1939	1,862,330
302,210	89,548,800	32,273,600	1940	2,135,125
333,250	113,546,400	41,931,800	1941	2,402,060
99,514	29,871,600	14,067,900	1942	2,386,290
33,445	5,283,300	5,431,000	1943	2,375,455
49,915	17,988,300	7,652,000	1944	2,392,265
145,596	49,245,200	17,845,400	1945	2,517,055
492,593	211,448,000	79,007,100	1946	2,821,044
888,083	418,178,500	156,759,900	1947	3,650,514
455,245	237,385,500	84,114,100	1948	3,975,773
614,712	262,843,600	102,660,700	1949	4,490,535
846,815	371,585,000	140,582,300	1950	5,172,134
675,060	330,610,900	123,630,800	1951	5,704,556
777,604	364,500,000	145,487,000	1952*	6,345,876
794,723	415,538,000	197,182,000	1953	6,992,604

*Revised

There were 325,837 conversion oilburners installed during 1953 in handfired coal heating systems, representing 41% of total sales. This compares with 46% in 1952. Burners installed in new homes increased to 39.3% of total sales, amounting to 312,326. In 1952 35.8% of burners were installed in new homes and, again by way of contrast, in 1941 new homes accounted for only 24.3% of installations and in 1948 dealers installed 41.9% of burners in new construction. In 1953, then, the percentage of burners installed in new homes was the second highest recorded and was evidence that more dealers were realizing the importance of this phase of their markets.

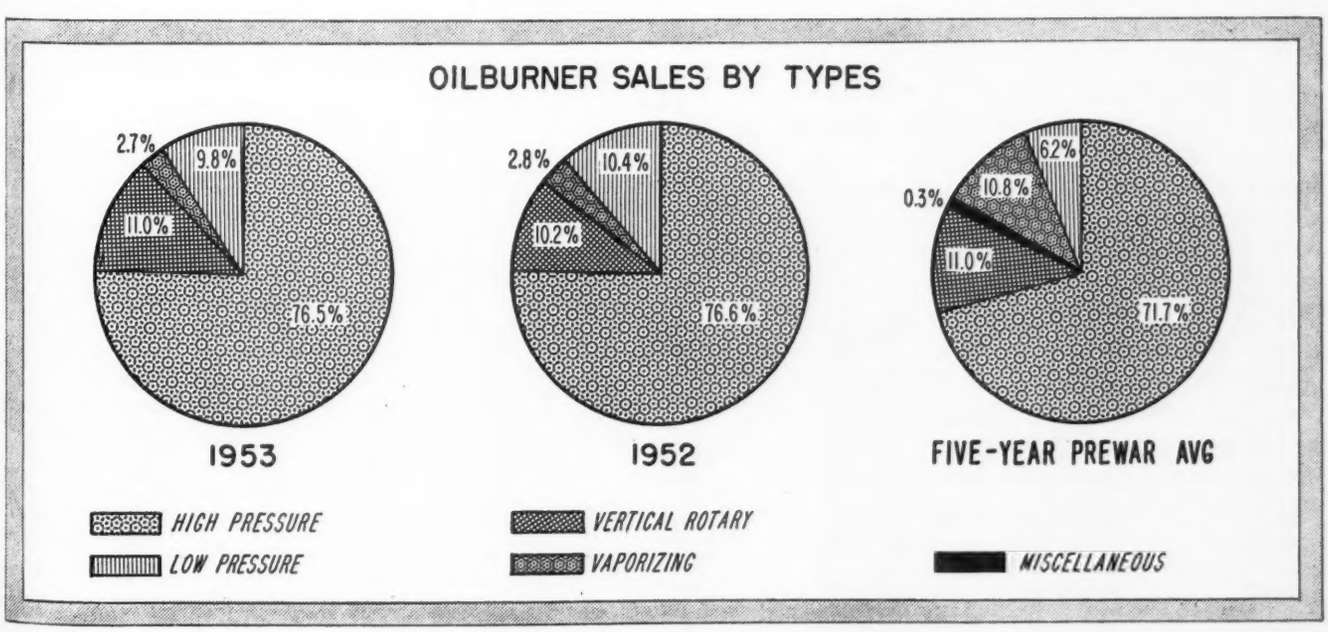


TABLE 3

Domestic Conversion Oilburners

Sales	*Retail Value*	*Factory Value*	*Year*	*No. in Use (End of Year)*
126,400	$79,400,000	$24,648,000	1930	648,500
104,000	50,310,000	16,640,000	1931	747,300
86,200	36,911,000	12,068,000	1932	827,320
80,800	31,263,000	10,423,000	1933	902,680
98,990	33,116,000	11,681,000	1934	991,980
136,825	43,373,500	13,408,900	1935	1,115,125
197,430	59,229,000	18,558,400	1936	1,281,305
184,920	54,181,600	15,903,100	1937	1,446,295
153,850	40,462,600	12,154,200	1938	1,559,675
200,020	48,004,800	15,601,600	1939	1,719,940
238,845	55,645,900	18,152,200	1940	1,933,605
237,965	59,490,200	19,275,200	1941	2,113,160
71,658	16,552,700	6,090,900	1942	2,073,260
21,363	1,885,800	1,837,200	1943	2,060,465
37,885	10,607,800	4,184,600	1944	2,072,445
119,680	34,292,200	11,249,900	1945	2,173,910
408,861	151,258,100	48,625,800	1946	2,397,554
669,615	262,489,000	83,701,900	1947	3,020,741
312,170	131,735,700	36,523,900	1948	3,208,365
440,748	155,143,300	47,160,000	1949	3,568,024
608,013	214,020,600	65,665,400	1950	4,057,412
477,267	189,475,000	55,363,000	1951	4,433,834
542,768	203,538,000	64,047,000	1952*	4,881,476
368,751	135,700,000	41,300,000	1953	5,181,558

*Revised

TABLE 4

Conversion Burner Price Trends

RETAIL					FACTORY			
Average	*% change prev. yr.*	*Aver. Min.*	*% change prev. yr.*		*Average*	*% change prev. yr.*	*Aver. Min.*	*% change prev. yr.*
$692	..	$554	..	1929	$240	..	..	..
629	— 9.1	516	— 6.8	1930	195	—18.7	..	..
495	—21.3	413	—19.9	1931	160	—18.0	..	..
438	—11.5	371	—10.1	1932	140	—12.5	..	..
395	— 9.8	341	— 8.1	1933	129	— 7.8	$109	..
341	—13.6	310	— 9.0	1934	118	— 8.5	99	— 9.1
317	— 7.0	275	—11.2	1935	98	—16.9	88	—11.1
300	— 5.3	266	— 3.2	1936	94	— 4.1	85	— 3.4
293	— 2.3	255	— 2.6	1937	86	— 8.5	82	— 3.5
263	—10.2	236	— 7.4	1938	79	— 8.1	76	— 7.3
240	— 8.7	218	— 7.6	1939	78	— 1.3	69	— 9.2
233	— 2.9	210	— 3.7	1940	76	— 2.6	63	— 8.7
250	+ 7.2	226	+ 7.6	1941	81	+ 6.9	65	+ 3.2
267	+ 6.8	245	+ 8.4	1942	85	+ 4.9	73	+12.3
276	+ 3.3	247	+ 0.9	1943	86	+ 1.2	76	+ 4.1
280	+ 1.4	258	+ 4.7	1944	98	+13.9	78	+ 2.6
313	+11.8	292	+13.2	1945	94	— 4.1	84	+ 7.7
370	+18.2	294	+ 0.7	1946	119	+26.6	90	+ 7.1
392	+ 6.0	353	+20.1	1947	125	+ 5.0	107	+18.9
422	+ 7.6	349	— 1.1	1948	117	— 6.4	101	— 5.6
352	—16.6	329	— 5.7	1949	107	—14.5	97	— 4.0
352	..	319	— 3.0	1950	108	+ 0.9	97	..
397	+11.3	330	+ 3.4	1951	116	+ 7.4	102	+ 5.2
375	— 5.5	326	— 1.4	1952	118	+ 1.7	102	..
368	— 1.9	320	— 1.8	1953	112	— 5.1	100	— 0.2

TABLE 5

Integral Boiler-Burner Units

Sales	*Retail Value*	*Factory Value*	*Year*	*No. in Use (End of Year)*
3,000	.....	.....	1932	3,800
7,800	.....	.....	1933	11,600
9,300	.....	.....	1934	20,890
10,510	$9,511,600	.....	1935	31,400
15,025	9,781,300	.....	1936	46,250
14,430	8,557,000	$3,795,100	1937	60,240
14,220	7,877,900	3,711,400	1938	73,930
19,220	9,744,500	4,286,100	1939	92,540
26,955	13,322,700	5,005,300	1940	118,560
39,990	21,874,500	9,717,600	1941	155,720
9,313	5,289,800	2,877,700	1942	163,040
6,637	1,705,600	2,090,600	1943	164,240
6,440	3,909,100	2,002,800	1944	167,040
9,027	5,984,900	2,491,500	1945	175,165
45,130	34,765,900	18,088,100	1946	219,131
63,054	52,650,000	23,014,700	1947	277,771
42,785	40,260,700	16,600,600	1948	318,417
55,324	43,872,000	20,027,300	1949	368,286
82,141	61,687,900	26,038,700	1950	434,401
58,731	46,573,700	22,688,300	1951	480,722
69,207	53,635,000	26,783,000	1952*	537,799
112,056	79,560,000	43,814,000	1953	628,988

*Revised

Oilburner Replacements

Number	*Year*	*%*
40,936	1940	15.2
56,315	1941	16.9
33,170	1942	33.3
13,910	1943	41.6
38,280	1944	76.7
29,847	1945	20.5
36,540	1946	8.0
58,613	1947	6.6
90,750	1948	19.9
58,200	1949	10.2
96,960	1950	11.5
91,808	1951	13.6
103,283	1952	13.3*
100,930	1953	12.7

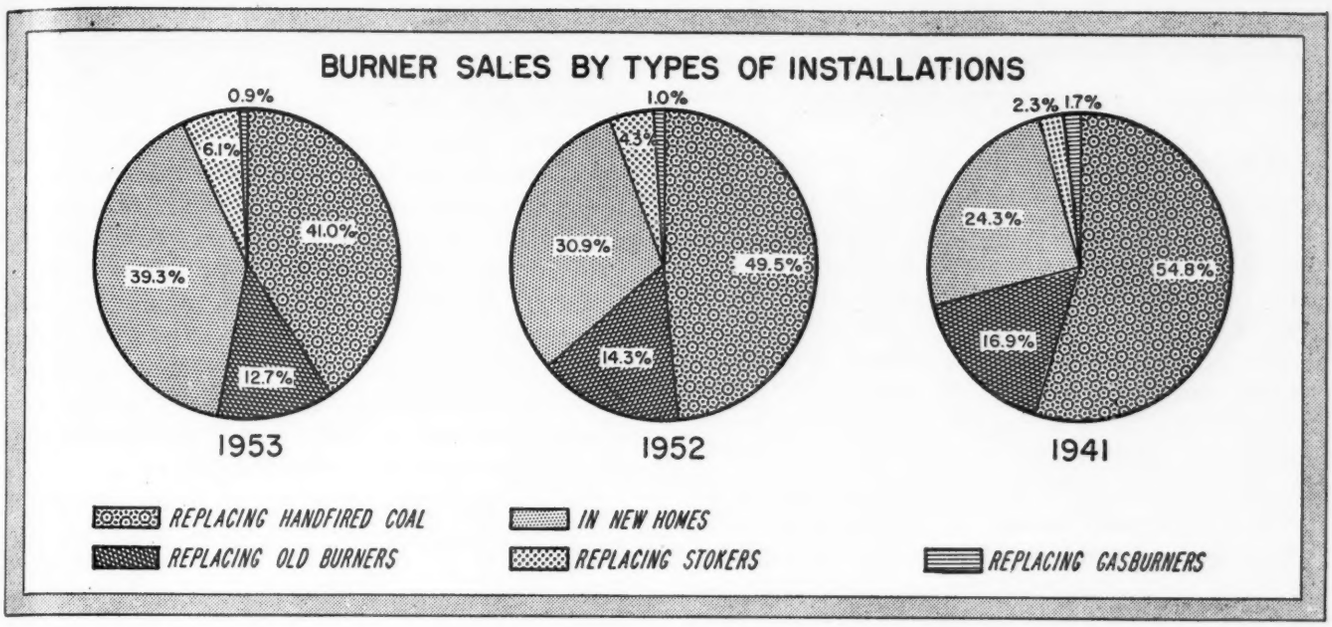
*Revised

TABLE 6

Prices of Factory-Assembled Boiler-Burner Units

RETAIL				
Average	*% change prev. yr.*		*Aver. Min.*	*% change prev. yr.*
$905	..	1935	$723	..
651	—28.0	1936	566	—21.7
593	— 8.9	1937	516	— 8.8
554	— 6.5	1938	482	— 6.6
507	— 8.3	1939	441	— 8.5
495	— 2.4	1940	365	—17.2
547	+11.5	1941	378	+ 3.6
568	+ 3.8	1942	473	+25.1
533	— 6.2	1943	361	—23.7
607	+13.9	1944	450	+24.6
663	+ 9.2	1945	539	+19.8
770	+16.1	1946	589	+ 9.3
835	+ 8.4	1947	691	+17.3
941	+12.7	1948	710	+ 2.7
793	—15.7	1949	682	— 4.0
751	— 5.3	1950	661	— 3.1
793	+ 5.6	1951	686	+ 3.8
775	— 2.3	1952	699	+ 1.9
710	— 8.4	1953	703	— 0.6

FACTORY				
$263	..	1937	$246	..
261	— 0.7	1938	244	— 0.8
223	—14.5	1939	208	—14.7
215	— 3.6	1940	183	—12.0
243	+13.0	1941	201	+ 9.9
309	+27.1	1942	229	+13.4
315	+ 2.0	1943	231	+ 1.0
311	— 1.3	1944	216	— 6.5
276	—11.2	1945	233	+ 7.9
351	+27.2	1946	267	+14.6
365	+ 4.0	1947	310	+16.1
388	+ 6.3	1948	345	+11.3
362	— 6.7	1949	342	— 0.9
317	—12.4	1950	311	— 9.1
393	+24.0	1951	336	+ 8.0
387	— 1.5	1952	324	— 3.8
391	+ 1.0	1953	322	— 0.1



Further breaking down the manner in which oilburners were used in 1953, 12.7% of sales were accounted for by equipment installed to replace worn out or obsolete oilburners. They totaled 100,930 and represented a slight drop from the 13.3% of 1952 sales that were used for this purpose. Also, 7,152 burners—0.9% of sales—were used to convert gasfired systems to oilburning, exactly the same percentage as last year. Finally, 48,478 coal stokers were removed and oilburners substituted. These were equal to 6.1% of oilburner sales and actually totaled better than 3-1/3 times the number of stokers sold during 1952.

To sum up, the total of other fuels replaced by oilburners comes to 381,467 or 48.0% of 1953 sales, compared to 50.8% of sales the previous year. As previously noted, we lost to other fuels 47,065 oilburners—only 1/8th as many.

Breaking down where they installed replacement oilburners, the dealers reported that during 1953 they sold 55.7% of them as straight conversion oilburners, compared with 53.8% in 1952; 18.9% of replacement installations involved substitution of a boiler-burner unit for old equipment, compared to 26.6% in 1952; 25.4% were replaced with complete furnace-burner units, an increase from 19.6% reported the previous year.

These percentages are national averages. By sections of the country the dealers reported replacement sales were made as follows:

	Conversion oilburners	*Boiler Units*	*Furnace Units*
New England	58.5%	26.2%	15.3%
Middle Atlantic	61.7	26.2	12.1
South	69.2	13.3	17.5
Midwest	52.4	10.3	37.3
Pacific	22.5	0.6	73.9
Total U. S.	55.7	18.9	25.4

TABLE 7

Heating Boiler Sales

	CAST IRON			STEEL		
	Total Output	*No. for oil*	*% for oil*	*Total Output*	*No. for oil*	*% for oil*
1935	160,105	29,310	18.3	14,415	14,181	98.1
1936	186,560	41,922	22.5	19,242	18,622	96.8
1937	169,707	58,462	34.2	16,569	15,321	92.7
1938	135,282	54,139	40.0	19,098	17,218	90.3
1939	146,919	61,070	41.6	23,658	21,857	92.4
1940	168,839	77,764	46.1	24,580	23,206	94.5
1941	178,076	80,176	45.0	25,666	24,173	94.2
1942	111,875	10,765	9.6	13,000	7,238	55.7
1943	81,500	8,852	10.9	3,550	1,230	34.7
1944	75,760	19,140	25.3	3,310	2,168	65.5
1945	66,740	20,088	30.1	16,008	10,979	68.6
1946	161,667	46,548	28.8	34,820	33,777	97.0
1947	233,905	73,279	31.3	105,714	94,123	89.0
1948	180,345	61,781	34.3	92,718	82,716	89.2
1949	144,275	50,495	35.0	84,876	74,520	87.8
1950	194,509	76,406	39.3	166,836	156,325	93.7
1951	159,007	68,214	42.9	92,892	86,950	93.6
1952*	187,596	89,670	47.8	107,755	102,367	95.0
1953	208,644	99,706	47.8	113,814	106,985	94.0

*Revised

Losses to other fuels in 1953 amounted to 47,065, less than 1% of the total oilburners in use, up from 33,001 oilburners replaced by other fuels during 1952 but a very slight increase based upon burners operating. There were 43,218 gasburners put in to replace oilburners, 91.8% of total losses to other fuels, compared with 82.2% of total losses in 1952. Losses to electricity, 3,279 or 7% of total losses, were down from 13.6% of total in 1952. Coalfired equipment replaced oilburners in only 568 homes last year. This, representing 1.2% of total losses, was a considerable drop from 1952

figures when coalfired equipment made up 4.2% of oilburners removed.

Kinds of oilheating Equipment

Oilburner sales of 794,723 in 1953 were divided: Conversion burners, 46.4%, compared with 69.8% in 1952; factory-assembled boiler-burner units, 14.1%, compared with 8.9% the previous year and factory-assembled furnace-burner units, 39.5%, an increase from 21.3%.

The reason for the impressive drop in the number of conversion burners last year is due to the fact that for the first time the overlap in Census reports of oilburner shipments have been taken into account. For some time now Census has followed a policy of reporting equipment as boiler or furnace-burner units if a burner manufacturer purchases a boiler or furnace from another manufacturer and combines it with his oilburner. At the same time if the burner manufacturer supplies burners to boiler or furnace manufacturers and they ship complete units, the burner manufacturer already has reported shipment of a conversion oilburner. Thus, there have been a considerable number of conversion burners shown on Census reports that actually have been used in the fabrication of boiler or furnace-burner units.

So, while Census reports were used as a check, much more weight was given this year to the breakdown of reporting dealers who told us what type of equipment they installed. As a result conversion oilburners were down 32.1% to 368,751 burners; boiler-burner units increased to 112,056 and furnace-burner units were up to 313,916.

At the end of 1953 there were 5,181,558 conversion oilburners installed, 74.1% of the total burners operating. Conversion oilburners operating at the end of 1952 accounted for 76.9% of total burners in use.

Integral boiler-burner units at year end totaled 628,988, representing 9.0% of all installations. By comparison at the end of 1952 boiler-burner units made up 8.5% of burners operating.

Integral furnace-burner units increased during 1953 to 1,182,058, 16.9% of total. On December 31, 1952 furnace-burner units installed were 14.6% of the 6,345,876 burners in use.

Conversion oilburners, boiler-burner units and furnace-burner units are shown as percentages of total sales in the table below. The boiler and furnace units, again, are factory-assembled jobs.

*1953** %	*1952* %		*Prewar* %
46.4	69.8	Conversion	80.5
14.1	8.9	Boiler Units	9.1
39.5	21.3	Furnace Units	10.4

*Calculated on revised basis. See text.

Annual sales of conversion oilburners, plus the value of retail and factory sales since 1930 are contained in TABLE 3. Retail value declined to a total of $135,700,000; factory values dropped to $41,300,000. Both reductions were caused more by fewer burners being involved than drops in prices.

This is shown in TABLE 4, Conversion burner price Trends, demonstrating the decreases in average and average minimum retail and factory prices. Conversions in 1953 sold for an average price of $368, down 1.9% from the $375 selling price in 1952. At the same time average minimum retail prices were down 1.8% to $320. The factory average for conversion burners was down 5.1% to $112, while dealers paid average minimum prices of $100 for conversion burners, down slightly from the $102 average minimum price in 1952.

A geographical tabulation of 1953 conversion burner installation prices by sizes of tanks is shown in the table. In 1952 the United States average price for single tank conversions was $375; two-tank conversions were sold for $488 on the average; 550 or 675 tank conversions cost $496 and 1,000 gallon tank jobs were put in for an average of $589. By comparison prices in 1953 for single tank conversions—again using the national average—were 1.9% less than average prices in 1952; two-tank conversions sold for 8.6% less and 550-675 tank jobs went for 1.4% less. Only 1,000 gallon tank conversions increased in price during 1953 on the average and they were reported as having been sold for only $3 more.

Conversion burner Price *by Size of Tank, 1953*

	One 275	*Two 275*	*550-675*	*1,000*
New England	$351	$458	$487	$556
Middle Atlantic	361	446	488	594
South	356	416	414	498
Midwest	375	442	533	630
Pacific	413	450	436	608
Total U. S.	368	446	489	592

Oilburner firing rates reported for all oilheating installations made during 1953 generally followed a normal pattern, with some slight increases in higher capacities indicating a greater percentage of oilburners being installed in larger homes. Burners with firing rates up to 1.65 gph accounted for 83.1% of installations, compared with 85.6% in 1952. Last year burners up to 1 gph fired 31.9% of installations, 27.9% in 1952; burners from 1.0 to 1.35 gph were used in 41.4% of the installations, 44.6% in 1952 and burners with capacities from 1.36 to 1.65 gph went into 9.8% of installations, 13.1% in 1952. Larger sizes totaled: between 1.66 and 2.0 gph, 6.1%, 5.1% in 1952; from 2.01 to 2.5 gph, 4.0% and 4.1% in 1952; above 2.5 gph, 6.8% and 5.2% in 1952.

Complete boiler-burner Units

Integral boiler-burner units installed during 1953 totaled 112,056, 14.1% of all sales, com-

pared with 69,207 or 8.9% of 1952 installations. Net gain in boiler-burner units operating increased the total to 628,988 at the end of 1953, up 6.1% and amounting to 9.0% of total oilheating systems in use. Annual sales, retail and factory values, with the number of boiler-burner units in use at the end of each year, appear in TABLE 5, with comparative figures back to 1932.

Retail value of the average boiler-burner unit installed during 1953 decreased 8.4% to $710; total retail value of all units sold amounted to $79,560,000. Factory prices paid by dealers for units advanced slightly to $391; total factory value of boiler units during 1953 was $43,814,000.

This year dealers were asked to classify the boiler sizes they sold in slightly different categories than formerly. They reported that boilers up to 300 sq. ft. net steam (480 sq. ft. net hot water) were used in 41.5% of all oilfired boiler installations last year; boilers from 301 to 500 sq. ft. net steam (800 sq. ft. net hot water) were used in 38.2% of wet heat installations; boilers from 501 to 650 sq. ft. net steam (1,040 sq. ft. net hot water) with 12.2% of such systems; boilers from 651 to 800 sq. ft. net steam (1,280 sq. ft. net hot water) with 8.1% of these jobs.

During 1952 dealers reported on these boiler sizes and the frequency with which they were used with wet heat installations: Up to 300 sq. ft. net steam, 28.2%; 301 to 399 sq. ft., 34.9%; 400 to 499 sq. ft., 15.7%; 500 to 599 sq. ft., 12.2% and 600 sq. ft. and larger, 9.0%.

The only basis for comparison between the re-

TABLE 10

Warm air furnace Shipments

1953		*1952**
	FORCED AIR	
29,192	Coal	21,262
374,964	Oil	345,433
448,493	Gas	398,889
852,649		765,584
	GRAVITY	
50,817	Coal	79,231
18,492	Oil	18,033
58,098	Gas	64,851
127,407		162,115
980,056	Grand Total	927,699

*Revised

TABLE 8

Integral Furnace-Burner Units

Sales	*Retail Value*	*Factory Value*	*Year*	*No. in Use (End of Year)*
3,175	$2,457,400	.....	1935	5,600
7,620	5,044,400	.....	1936	13,120
11,390	6,526,500	$2,540,000	1937	24,010
11,290	6,243,400	2,427,300	1938	34,140
16,900	8,771,100	3,464,500	1939	49,850
36,410	19,115,300	7,646,100	1940	82,960
55,295	32,181,700	12,939,000	1941	133,180
18,543	8,029,100	5,099,300	1942	149,990
5,445	1,691,900	1,503,200	1943	150,750
5,590	3,471,400	1,464,600	1944	152,780
16,889	8,968,100	4,104,000	1945	167,980
38,602	25,429,000	12,293,200	1946	204,359
155,414	103,039,500	50,043,300	1947	352,002
100,290	65,389,100	30,989,600	1948	447,277
118,640	63,828,300	35,473,400	1949	554,225
156,661	95,876,500	48,878,200	1950	680,321
139,062	94,562,200	45,579,000	1951	790,000
165,629	107,327,000	54,657,000	1952*	926,601
313,916	200,278,000	112,068,000	1953	1,182,058

*Revised

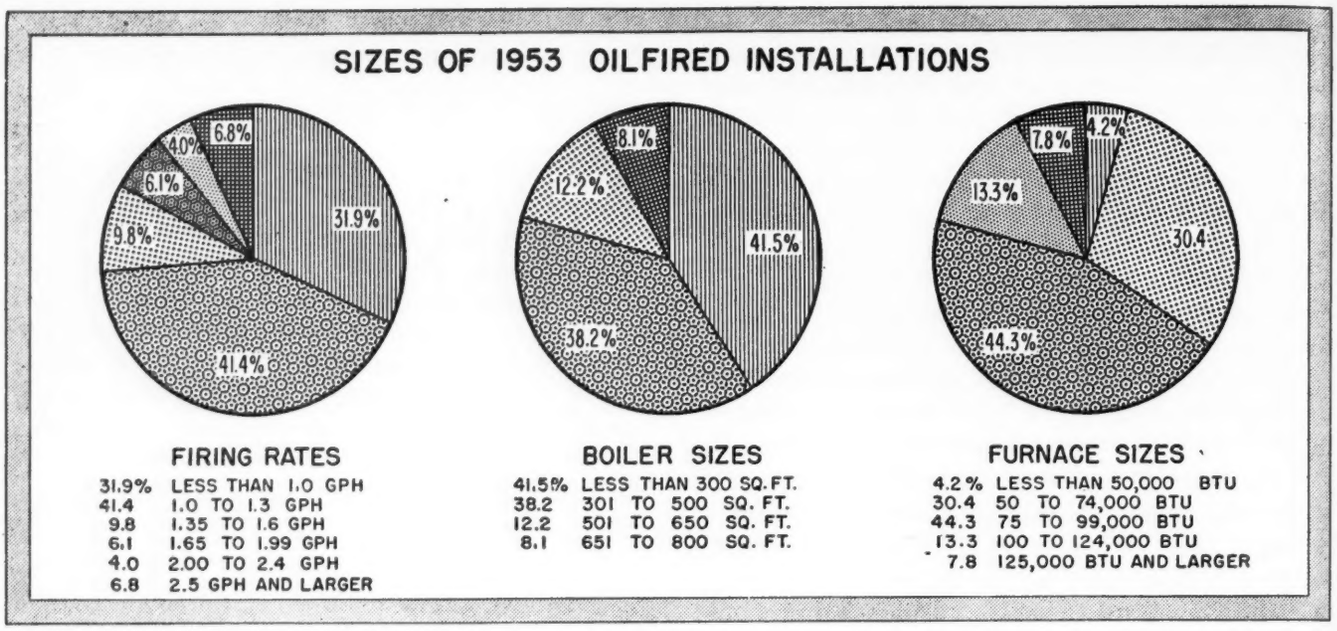
TABLE 9

Price Trends of Factory-Assembled Forced-Air Units

RETAIL				
Aver-age	*% change prev. yr.*		*Aver. Min.*	*% change prev. yr.*
$274	..	1935	$642	—10.2
662	—14.4	1936	576	—10.2
573	—13.4	1937	499	—13.3
553	— 3.5	1938	481	— 3.4
519	— 6.2	1939	402	—16.4
525	+ 1.2	1940	360	—10.4
582	+10.9	1941	402	+11.7
611	+ 4.9	1942	413	+ 2.7
613	+ 0.3	1943	418	+ 1.2
621	+ 1.3	1944	434	+ 3.8
531	—14.5	1945	479	+10.4
659	+24.1	1946	526	+ 9.8
663	+ 0.6	1947	610	+15.9
652	— 1.7	1948	623	+21.3
583	—10.6	1949	538	—13.7
612	+ 5.0	1950	610	+13.4
680	+11.1	1951	624	+ 2.3
648	— 4.7	1952	639	+ 2.4
638	— 1.6	1953	625	— 2.2
		FACTORY		
$223	..	1937	$210	..
215	— 3.6	1938	204	— 2.8
205	— 4.7	1939	198	— 2.9
210	+ 2.4	1940	196	— 2.0
234	+11.4	1941	201	+ 2.5
275	+17.5	1942	236	+17.4
276	+ 0.4	1943	241	+ 2.1
262	— 5.1	1944	217	— 9.9
243	— 7.3	1945	239	+10.1
318	+30.9	1946	265	+10.9
322	+ 1.3	1947	297	+12.1
309	— 4.0	1948	304	+ 2.3
299	— 3.2	1949	297	— 2.3
312	+ 4.3	1950	306	+ 3.0
328	+ 5.1	1951	316	+ 3.3
330	+ 0.6	1952	311	— 1.6
357	+ 8.2	1953	300	— 3.5

Are Units bought assembled or unassembled?

ASSEMBLED	*New Eng.* %	*Mid. Atl.* %	*Mid-west* %	*South* %	*Pacific* %	*U.S.* %
Boiler Units						
Under 400 sq. ft. steam	50	28	20	32	50	34
Over 400 sq. ft. steam	32	24	33	19	..	25
Furnace Units						
Under 100,000 Btu/hr.	64	50	47	63	87	59
Over 100,000 Btu/hr.	45	28	43	23	40	32
UNASSEMBLED						
Boiler Units						
Under 400 sq. ft. steam	50	72	80	68	50	66
Over 400 sq. ft. steam	68	76	67	81	100	75
Furnace Units						
Under 100,000 Btu/hr.	36	50	53	37	13	41
Over 100,000 Btuhr.	55	72	57	77	60	68



ports for both years shows that during 1953 boilers with capacities up to 650 sq. ft. net steam were used in 91.9% of such installations; during 1952 boilers up to 599 sq. ft. were used with 91% of the boiler jobs.

Total sales of heating boilers in 1953 advanced 9.2% to 332,458 cast-iron and steel units. Cast-iron boiler sales were 208,644, 11.2% more than the 187,596 sold in 1952; steel boilers totaled 113,814, registering a 5.6% over 1952 sales of 107,755 boilers.

There were 206,691 boilers used for oilfiring in 1953, 106,985 steel boilers and 99,706 cast-iron units. Together they represented 64.1% of total boiler sales, just about the same as 1952. Then, the 192,351 oil boilers were 65% of the 295,351 units sold. Percentages of boilers used for oilfiring remained almost unchanged: 94% for steel and 47.8% for cast-iron.

Complete furnace-burner Units

Factory-assembled furnace-burner units were used with an estimated 39.5% of all oilheating installations last year—a total of 313,916 units, compared with 21.3% of 1952 installations when 165,629 furnace units were sold. At the end of 1953 the number of such units operating passed the million mark and numbered 1,182,058, representing 16.9% of total oilburners in use. Data for last year and previous years are contained in TABLE 8, including information on retail and factory values each year and the number of furnace-burner units operating at the end of each year since 1935.

The average furnace unit installed during 1953 was sold for $638, a 1.6% decrease from the average selling price in 1952; total retail value last year was $200,278,000. Dealers paid factory prices of $357 for the average furnace unit, an advance

TABLE 11

How big were the Jobs

	New Eng.	*Mid. Atl.*	*South*	*Mid-west*	*Pac.*	*U.S.*
OILBURNER FIRING RATES:						
Less than 1.0 gph	29%	18%	50%	41%	64%	32%
1 to 1.35 gph	52	44	30	37	28	41
1.36 to 1.65 gph	10	12	12	8	5	10
1.66 to 2.0 gph	6	7	4	6	1	6
2.01 to 2.5 gph	2	6	1	4	1	4
2.6 gph and up	1	13	3	4	1	7
BOILER SIZES:						
Less than 300 sq. ft.	58	32	55	44	..	42
301 to 500 sq. ft.	28	45	39	34	..	38
501 to 650 sq. ft.	12	13	4	13	..	12
651 to 800 sq. ft.	2	10	2	9	..	8
FURNACE SIZES:						
Less than 50,000 Btu	2	3	..	10	..	4
50 to 74,000 Btu	29	34	24	24	36	31
75 to 99,000 Btu	53	41	44	42	51	44
100 to 125,000 Btu	13	14	22	12	9	13
125,000 Btu and up	3	8	10	12	4	8

of 8.2% from the 1952 average price; total factory value of units was $112,068,000. Price trends for factory-assembled forced air units are contained in TABLE 9.

Warm air furnaces shipped during 1953 increased 5.6% to a total of 980,056. Forced air units made up 87% of this total, or 852,649, the remaining 13%, 127,407 furnaces, were gravity type. Furnaces designed for both forced air and gravity oilfired systems increased 8.3% to 393,456, compared with 363,466 oil furnaces shipped during 1952. In 1953, 95.3% of the oil furnaces were forced air units and total oil furnaces amounted to 40.1% of all furnaces shipped during the year. In 1952 both these percentages were almost identical. Details of furnace shipments during 1953 are contained in TABLE 10.

The number of oilfired warm air furnaces installed in systems during 1953 with bonnet capacities up to 50,000 Btu/hr totaled 4.2%; capacities

from 50,000 to 75,000 Btu/hr, 30.4%; capacities from 76,000 to 100,000 Btu/hr, 44.3%; capacities from 101,000 to 125,000 Btu/hr, 13.3% and with capacities higher than 125,000 Btu/hr, 7.8%. During 1952 oilfired furnaces with the same capacities and in the same order were used in the following percentages of oilburning warm air systems: 3.8%, 24.5%, 45.7%, 14.6% and 11.4%.

During 1953 furnaces in systems with bonnet capacities up to 100,000 Btu/hr took 78.9% of the oil furnaces; in 1952 the same units were used in 74.0% of all oilfired furnaces.

Commercial Oilburners

A gain of 27.4% was registered in the sale of commercial heating burners during 1953 when installations of such equipment totaled 48,852. During 1952 a total of 38,334 commercial oilburners were sold for heating uses. At year end there were 560,556 commercial burners used for oilheating, a gain of 8.5% over the 516,589 burners in use at the end of 1952. TABLE 12 contains comparative data for commercial oilheating for 1953 and previous years.

Last year 20,811, or 42.6% of total commercial oilheating installations, involved burners using distillate fueloil in capacities over 6 gph; the remainder, 57.4% of the total or 28,041 burners, used residual oils. In 1952 distillate burners accounted for 49.6% of total sales; residual burners were used in 50.4% of commercial oilheating installations.

This year the dealers were asked how many commercial and industrial burners they installed using Nos. 4 or 5 oil and No. 6 oil. Returns indicate that 16% of the oilheating dealers sell Nos. 4 and 5 oilburners, installing in 1953 on the average of six burners apiece. Nearly 8% sell equipment that burns No. 6 oil and last year each of these dealers averaged 16 installations.

Unit steam generators were reported as being handled by 6% of our dealers, with each selling an average of three units.

A question on commercial boilers was divided into two parts: About 7% of the dealers are selling commercial boilers in the capacity range between 800 and 1,500 sq. ft. net steam and during 1953 they moved an average of five boilers each; 12% of the dealers sold commercial boilers in sizes larger than 1,500 sq. ft. net steam, installing an average of four apiece last year.

TABLE 12
Commercial Oilheating

Sales		*No. Operating (End of year)*
14,990	1935	176,240
18,435	1936	192,830
19,380	1937	210,275
13,955	1938	222,880
16,445	1939	237,680
20,710	1940	256,320
34,750	1941	287,595
55,360	1942	293,120
44,470	1943	285,045
30,705	1944	286,680
30,515	1945	288,812
40,498	1946	325,310
48,780	1947	369,210
28,433	1948	393,550
25,220	1949	414,310
34,737	1950	445,573
40,565	1951	482,088
38,334	1952*	516,589
48,852	1953	560,556

*Revised

Cooling Equipment

For the first time information was asked about the quantities of room coolers and central cooling systems sold by oilheating dealers. About 27% of the dealers were selling room coolers in 1953—an average of ten units per dealer; 20% of them installed central cooling systems and the average sold was five systems. These ranged from 1 to 12 systems, with one dealer reporting 42 installed last year.

Of the dealers who were not selling cooling

TABLE 13
Domestic and Commercial Stokers

Total Sales		CLASS 1 *Bitum.*	CLASS 1 *Anth.*	CLASS 1 *Total*	CLASS 2 *Bitum.*	CLASS 2 *Anth.*	CLASS 2 *Total*	*End Year In Use*
144,758	1940	123,167	12,837	136,004	7,784	970	8,754	637,695
182,956	1941	158,734	17,110	175,844	6,513	599	7,112	802,345
79,062	1942	62,753	11,562	75,315	4,391	356	4,747	877,455
17,765	1943	4,460	472	4,932	10,790	2,043	12,833	894,330
31,603	1944	1,714	450	2,164	27,196	2,243	29,439	925,435
119,279	1945	89,522	3,525	93,047	24,349	1,883	26,232	1,029,150
181,223	1946	164,304	7,044	171,348	8,967	908	9,875	1,160,755
61,596	1947	53,372	3,364	56,736	4,469	391	4,860	1,186,195
76,477	1948	61,355	9,504	70,859	4,857	761	5,618	1,238,225
29,994	1949	21,988	4,991	26,979	2,612	403	3,015	1,235,560
19,635	1950	13,102	4,191	17,293	1,855	487	2,342	1,175,537
19,174	1951	12,451	4,268	16,719	1,941	414	2,355	1,124,945
19,300	1952*	8,080	8,061	16,141	1,616	543	2,159	1,079,973
14,494	1953	6,926	5,853	12,779	1,374	341	1,715	999,540

*Revised

TABLE 14

Domestic Gasburners

Annual Sales					
Conversion	*Boiler Units*	*Furnace Units*	*Total*		*No. in Use (End of Year)*
21,687	10,201	56,666	88,554	1940	1,187,486
36,335	15,007	85,043	136,385	1941	1,310,222
6,087	10,966	29,412	46,465	1942	1,352,040
800	3,485	8,970	13,255	1943	1,363,970
3,180	5,217	12,113	20,510	1944	1,382,430
14,183	14,959	27,676	56,818	1945	1,433,570
400,000	32,500	230,000	662,500	1946	2,027,548
90,000	44,000	188,000	322,000	1947	2,297,000
48,500	30,000	193,000	271,500	1948	2,538,500
290,000	50,000	297,000	637,000	1949	3,119,600
344,275	70,455	576,270	991,000	1950	4,087,300
170,700	62,900	418,890	652,560	1951	4,677,200
234,240	60,825	452,690	747,755	1952*	5,332,300
192,660	81,120	506,220	780,000	1953	6,073,300

*Revised

equipment in 1953, 60% of them say they will add these units to their line in 1954.

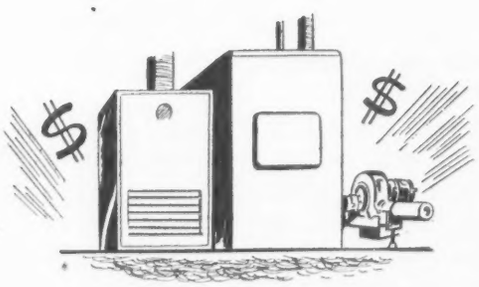
Competitive Equipment

Sales of domestic and commercial stokers are shown in TABLE 13, including Class I units up to 60 lbs. of coal per hour and Class II, 60 to 100 lbs. per hour, broken down by classes and showing the number in use at the end of each year since 1940. Total for both types in 1953 was 14,494, a drop of 24.9% from the 19,300 sold the previous year. Stokers during 1953 were divided: Class I, 12,779 down from 16,141 sold in 1952; Class II, 1,715, a drop from 2,159 in 1952.

The number in use at the end of the year continued the trend of recent years in showing a net loss of 80,455, 5-1/2 times 1953 sales. At the end of 1952 there were 1,079,973 stokers in use. Deducting worn out or damaged units that were replaced by other stokers, plus 48,478 replaced by oilburners and approximately 45,000 replaced by gasburners, the number operating at the end of 1953 had dropped to 999,540.

Preliminary estimates of gasheating installations last year, prepared by Gas Appliance Manufacturers Association and GAS HEAT magazine, are shown in TABLE 14. Prior to 1950 the data published were records of factory shipments and did not take into account replacements, losses or stock changes. For the past four years GAS HEAT magazine has estimated actual sales and installations and these figures appear in the table.

During 1953 total gasheating installations were 780,000, up 4.6% from the 747,755 installed the previous year, and made up of 192,660 conversion burners down from 234,240 conversion burners reported in 1952; 81,120 gas boiler-burner

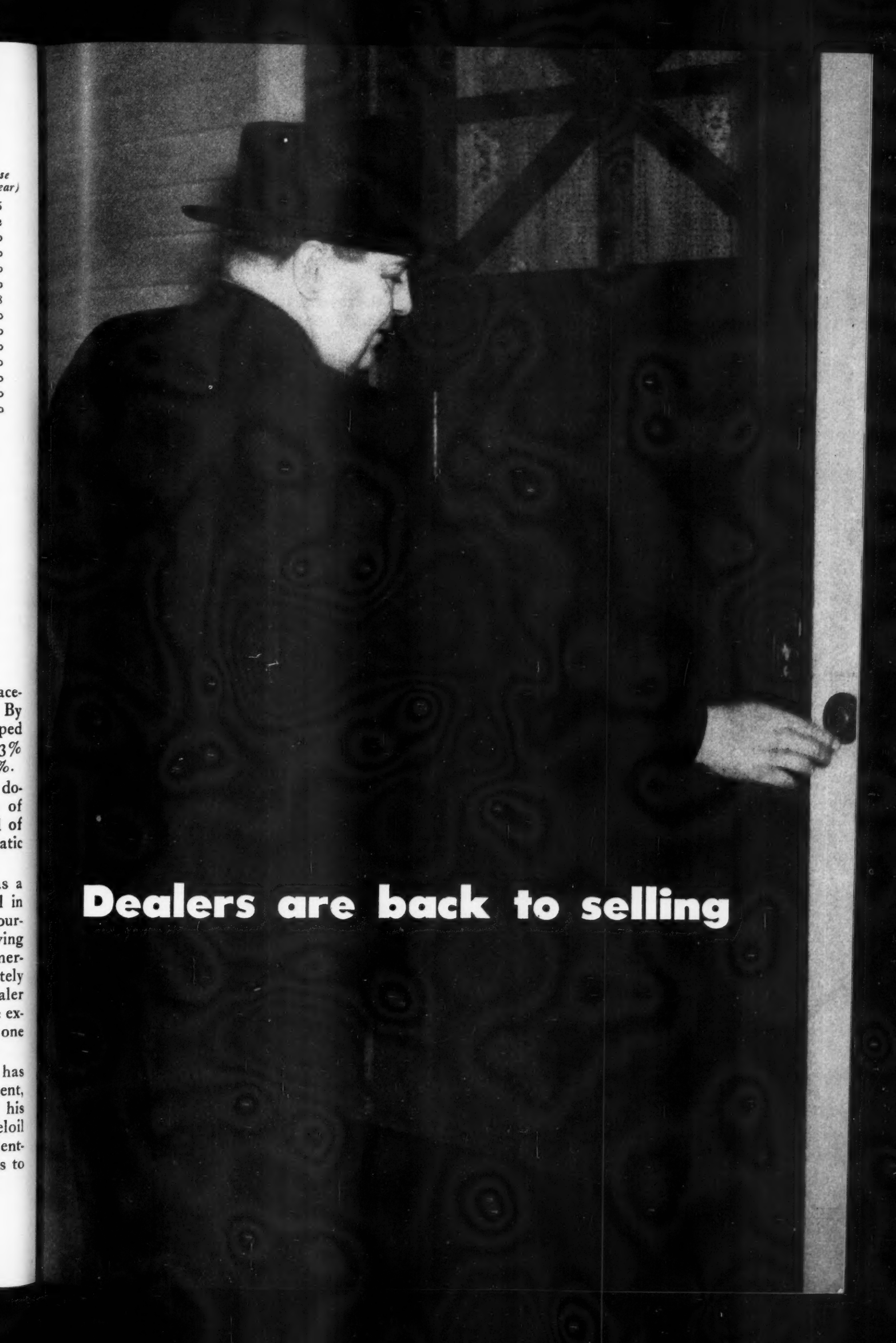


units up from 60,825 in 1925 and 506,220 furnace-burner units up from 452,690 sold in 1952. By types, conversion burner installations dropped 17.8%; boiler-burner units registered a 33.3% gain and furnace-burner units increased 11.8%.

At the end of the year there were 6,073,300 domestic gasheating installations in use, a gain of 13.9% from the 5,332,300 in use at the end of 1952 and representing 43.2% of all automatic heating installations.

Looking back, 1953 can be remembered as a year during which nearly all dealers did well in nearly all phases of their businesses. Most encouraging perhaps is the indication that after having been told for so long that more aggressive merchandising was required—and agreeing completely—1953 marks the year when the oilheating dealer demonstrated that he either now believes those exhortations or that he has become convinced in one way or another.

In any event, the average oilheating dealer has paid more attention to the details of management, merchandising and maintenance — managing his business, merchandising his equipment and fueloil and maintaining his customer's equipment efficiently. And, happily, from all indications he plans to continue doing so during 1954.



Dealers are back to selling

Dealers improve as Marketers

With Buyers back in the Saddle oilheating sales Activity is intensified

THERE ARE a good many indications throughout the oilheating industry that the dealers have buckled down to serious business and are out to do battle to protect their investments and profits. This is not only apparent in some of their activities during 1953 but it is even more clear in their projections for 1954.

In the "Oilheating Trends" section of this issue we saw that the greatest emphasis on business changes for the coming year is on larger selling programs. Nearly two out of five among all oilheating outlets has made definite plans involving greater promotional expense or larger physical facilities for selling in the New Year.

The fact that the dealers were able to install just under 800,000 domestic oilheating jobs in 1953 is an indication of fresh determination to get going again. This does not mean that there have not been other years where they sold more, but in those years much of the business came without serious effort on the part of the better known and well established companies.

Now the dealers have rather strenuous competition from natural gas in a very large share of the good oilheating markets and they recognize that they are going to find it necessary to do a real merchandising job. It's true that in 1953 oilheating outsold gas heating by a small margin but much of the reason for this lay in the one great limitation of the gas industry, a shortage of product in specific big markets that made it necessary to refuse business.

There is strong indication that oilheating will continue to outsell gas by a modest margin largely because of these physical restrictions in the competitive industry. Were it not for that factor it would probably be outselling us today because of its low installation cost, particularly in the new home field. Fortunately for oilheating men the gas crowd will always have far more physical limitations than we do.

Apparently the threat of the competitive fuel has had much to do with oilheating dealers getting themselves stripped for action. In a good many markets they are getting together on promotional programs. Some of these are not as large as could be hoped, but for every one such program operating in the country five years ago there are at least a half dozen today.

One good indication of revived selling activity is shown in TABLE 1 where we see the amounts the dealer spent for advertising oilheat in 1953. As we have explained in previous years the figures in the table have a quite general connotation rather than specific. For example where we show that the average dealer in 1953 spent for advertising $27.31 for each oilburner installed this does not mean that he always advertised oilburners with this money. We simply use the oilburner as a common denominator of the activity of nearly all dealers. We took his total advertising investment in 1953 and divided it by the number of burners sold just as we have in earlier years.

In 1952 his total advertising expenditure per burner sold was $23.64 so we can see that he raised it about 16% in 1953. This is more than his business increased so it shows that he was stepping out with more promotion.

Newspaper advertising continued to lead among the media followed by direct mail and telephone directory. The average dealer increased his expenditure on each of these items over the previous year. He spent less on radio and on billboards but more on television. Fewer dealers are using television than they were a year ago but those who have stayed with it are spending heavily.

A little less than half of oilheating dealers in 1953 employed salesmen. This point is brought out in TABLE 2. The reporting companies that do have salesmen had anywhere from one to twelve but the average was just a little over two. The type of oilheating dealer that employs salesmen sold six times as many burners as the dealer who does not. In other words the one-man operation sold

TABLE 1

Dealers Spent More For Advertising in 1953

	Percent of Dealers Using	*Average spent per dealer Using*	*Spent per Burner Installed*	*Spent per No. 2 oil Customer*
Newspapers	69%	$1,015	$11.36	$ .65
Direct mail	48	765	5.96	.34
Telephone directory	75	341	4.14	.24
Radio	25	554	2.29	.13
Television	3	4,320	2.23	.13
Billboards	9	929	1.33	.08
Total			$27.31	$1.57

TABLE 2

Salesmen average 55 burners

	1953
Percent of dealers having salesmen	45%
Average number salesmen per dealer	2.2
Average burner sales per dealer having salesmen	121
Average sales per salesman	55
Average burner sales per dealer with no salesmen	21

21 installations during the year. By this we don't mean that a one-man dealer had no employees. He may have had several mechanics or truck drivers but on his oilheating equipment he personally sold what business there was.

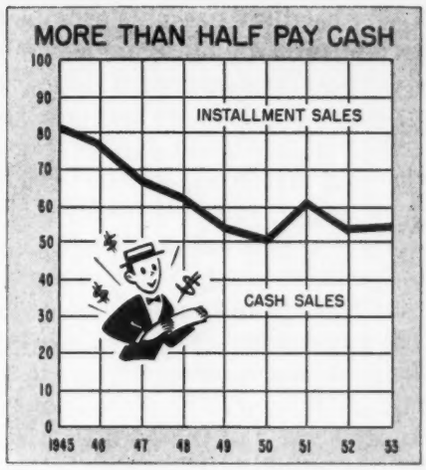
TABLE 3 shows that the oilheating salesman working on salary and commission had the best income in 1953. He nosed out the straight commission man by about $200.

With $5690 annual income the oilheating salesman has come a long way from depression years. In fact these income levels will be expected to attract some of the additional men we are going to need in 1954. Notice further down in the table that the Midwestern salesmen topped other sections of the country by several hundred dollars. This again brings to mind the paradox of Midwestern oilheating.

TABLE 3

Salary and Commission Men earn most

Percent selling on commission	41%
on salaries	19
on salary and commission	40
AVERAGE INCOME	
commissions	$5,664
salaries	5,071
salary and commission	5,871
all types	5,690
AVERAGE INCOME BY AREAS	
New England	$5,476
Mid-Atlantic	5,592
South	5,166
Midwest	6,342
Pacific Northwest	5,146
All Sections	$5,690



With the toughest cheap natural gas competition of any reporting section of the nation this area has shown the greatest virility in oilheating expansion each year since World War II.

The first feature article in this annual analysis shows how 1953 installations were divided by types. Included in this division were new home sales which represented something over 300,000 installations or 39% of the total. TABLE 4 brings some detail on this new home work. The first column shows what share of total installations were new home business in each of the geographic sections of the country. Notice that the Pacific Northwest was highest with 48% and the Mid-Atlantic lowest with 34%.

This recalls to mind the fact that the industry comes nearest to saturation in the Pacific Northwest with the large Puget Sound cities being 82% oilheated. It follows that much of the new sales must be in new homes. In the Mid-Atlantic area we have just the opposite situation. There we find the largest number of oilburners in any geographic division of the country but at the same time relatively low saturation.

New York State with a million and a quarter oilburners in use is still more than half coal heated.

The other three columns in this table show the amount of new home business done direct with the factory by the builder, the amount sold by fueloil companies and the balance by various types of heating dealers.

The year 1953 was a little out of the ordinary in its seasonal pattern. TABLE 5 shows the percent of oilburners installed by months during the year. It also shows the average of seven postwar years and a prewar average. Notice that 1953 was abnormal in that it started slow and ended fast. This is much better than having it the other way around. It means that we are going into the first quarter of the new year with a little more than average momentum. You can see that by comparing the 1953 last quarter at 34.2% of the year with a normal postwar year having 31.5% in that quarter.

Factory shipments on the other hand reversed the trend of retail installations through the year. The factories started stronger and ended weaker. Again this is a healthy condition, because inventories will be down and the new year can start with some very good business.

TABLE 4

New home oilheating channels

	Percent of total Installations	SOLD BY *Factory to builder*	SOLD BY *Fueloil Companies*	SOLD BY *Heating Dealers*
New England	40%	10%	46%	44%
Mid-Atlantic	34	15	35	50
South Atlantic	46	17	13	70
Midwest	42	15	11	74
Pacific N. W.	48	18	21	61
All Sections	39	15	28	57

TABLE 5

Oilburner installations by Months

	1953	*Postwar Avg.*	*Prewar Avg.*
January	5.2%	5.2%	4.3%
February	3.8	4.4	3.6
March	3.2	3.6	5.3
First Quarter	12.2	13.2	13.2
April	5.9	5.6	6.5
May	6.4	7.5	6.7
June	7.3	7.5	7.1
Second Quarter	19.6	20.6	20.3
First Half	31.8	33.8	33.5
July	7.9	8.4	8.7
August	13.2	12.5	11.5
September	12.9	13.8	17.2
Third Quarter	34.0	34.7	37.4
October	14.2	12.8	16.2
November	12.3	11.1	8.0
December	7.7	7.6	4.9
Fourth Quarter	34.2	31.5	30.1
Second Half	68.2	66.2	66.5

With natural gas quite prominent in the competitive picture we find quite a number of oilheating dealers selling some of it. Very rarely do they sell much. TABLE 6 shows that on a national basis they sell 13 oil jobs to one gas. However in the Midwest they mix the two quite freely, selling only two oil jobs to one gas. This refers, of course, to such dealers as sell both products.

Notice the first column in the table which shows that 29% of oilheating dealers in the nation also sell gas equipment. There is a great variation by sections ranging from 6% in the Far West to 50% in the Midwest. The second column shows that almost one-fifth of the companies selling fueloil, and naturally selling oilburners, also sell gas heating.

You are not to add the first and second columns and say that 48% sell gas heating. The fueloil distributors of the second column are included in the oilheating dealers of the first column, because, of course, it is their oilheating department that is selling some gas heat. Again, you cannot subtract the 19% of fueloil distributors from the corresponding figure of 29% in the first column and say that the difference is 10%, to represent oilheating dealers only. This would be wrong because there are thousands more oilheating dealers in the country than there are fueloil distributors.

The remainder of this table shows that in nearly three-fourths of oilheating markets the cost of gas fuel is higher than the cost of oil. The strong exception to this generality is, of course, the Midwest, where gas is cheaper in more than four-fifths of the cities. Of course, if we were to make this comparison based on every heating market in the nation we would probably find gas cheaper in more towns than oil. However, the majority of these towns would be in southern and southwestern states where heating requirements are relatively light.

The real tieup in the oilheating industry continues to be that of oilburners and fueloil as shown quite clearly in TABLE 7. There are minor changes in direction between the various units of this table

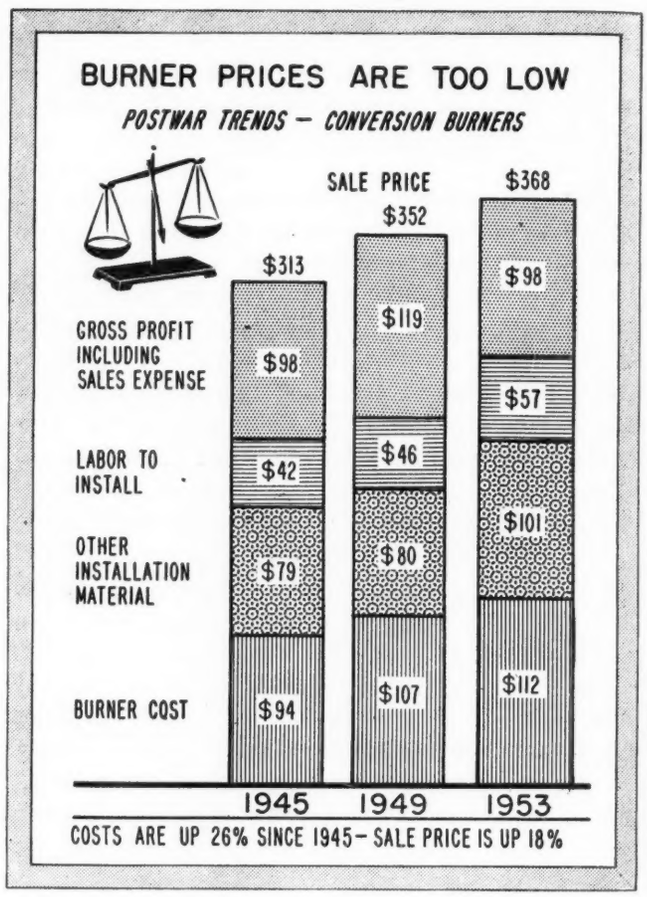


TABLE 6

Crossing the Gas Line

	Oilheating Dealers Selling Gas Heat	*Fueloil* Distributors Selling Gas Heat*	*Ratio Their Oil To Gas Sales*	*Percent of Cities Where Gas Costs More than oil*	*Less than oil*
New England	18%	16%	12-1	100%	0%
Mid-Atlantic	27	20	8-1	90	10
South Atlantic	21	12	25-1	93	7
Midwest	50	26	2-1	18	82
Pacific	6	6	59-1	69	31
All Sections	29	19	13-1	72	28

*See explanation of this in the text.

TABLE 7

Fueloil continues to lead Oilheating Dollars

PERCENT OF TOTAL DOLLAR VOLUME OF ALL REPORTING DEALERS	*New England*	*Mid Atlantic*	*South*	*Mid West*	*Pacific N. W.*	*All Sections*
in fueloil	47%	45%	35%	24%	58%	41%
in oilheating equipment	18	23	20	28	14	22
in oilburner service	10	10	11	12	5	10
in coal	8	10	12	1	4	7
in gasoline, lubes, TBA	4	6	8	12	6	7
in coal or gas heating equipment	1	4	2	12	1	5
in plumbing	4	1	1	2	1	2
in summer cooling	..	..	4	2	1	1
in home appliances	3	..	2	1	3	1
in other business	5	1	5	6	7	4

TABLE 8

Oilheating specialists

DOMINATE SALES

Burners sold by dealers whose principal business (LARGEST DOLLAR VOLUME) is in the products listed:

	Average Number Sold 1953	*Group % of all Burners*
Oilburning Equipment	101	36%
Coal or Gas burning Equipment	67	5
Plumbing	21	1
Oilburner Service	23	2
Fueloil	85	46
Coal	54	3
Gasoline, Lubes, TBA	42	4
Appliances	2	1
Other business	18	2
All Dealers	78	..

	Percent of Total Oilburners sold by Companies who also sell Fueloil
New England	87%
Mid-Atlantic	77
South Atlantic	41
Midwest	59
Pacific N. W.	72
All Sections	72

from one year to the next but no substantial alteration. Notice what this table actually sets forth. It has nothing to do with who sells the burners; that comes later. This divides their dollar volume into all of their many activities.

For example we took all of the reporting dealers from New England and lumped them together into one total. We find that out of their combined dollar volume of sales in 1953 fueloil accounted for 47%, oilheating equipment 18%, oilburner service 10%, and so on down the table.

This year for the first time we have separated the gasoline business and find that it represents 7% of the total. When you contrast this with 41% representing fueloil it becomes clear that when an oil company is in the business of selling oilheating equipment it is usually the type of company that specializes on fueloil.

Looking down the table we find that summer cooling represented only 1%. Even so this was a few thousand central cooling installations and it promises to become decidedly more important.

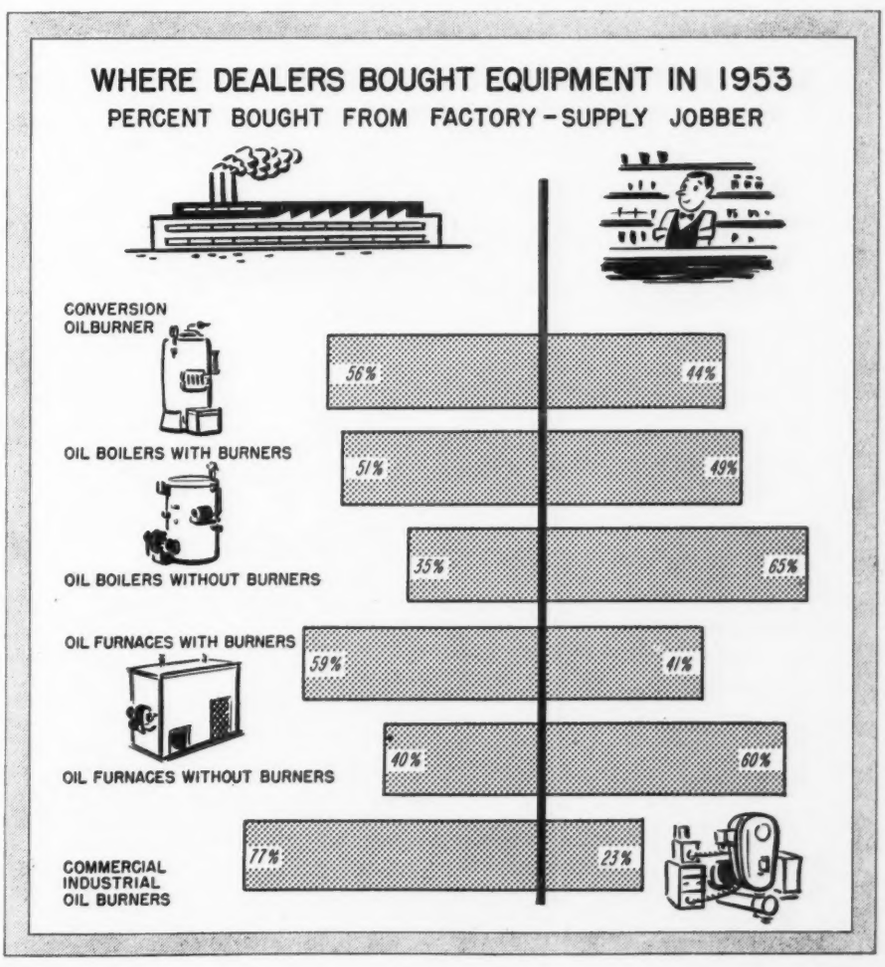
TABLE 9

Buying Channels

	PERCENT BOUGHT FROM	
Product	*Factory*	*Supply Jobbers*
CONVERSION OILBURNERS		
New England	67%	33%
Mid-Atlantic	66	34
South Atlantic	48	52
Midwest	45	55
Pacific N. W.	27	73
All Sections	56%	44%
OIL BOILERS WITH BURNERS		
New England	58%	42%
Mid-Atlantic	60	40
South Atlantic	33	67
Midwest	44	56
Pacific N. W.	26	74
All Sections	51%	49%
OIL BOILERS WITHOUT BURNERS		
New England	34%	66%
Mid-Atlantic	40	60
South Atlantic	25	75
Midwest	40	60
Pacific N. W.	5	95
All Sections	35%	65%
OIL FURNACES WITH BURNERS		
New England	65%	35%
Mid-Atlantic	61	39
South Atlantic	60	40
Midwest	53	47
Pacific N. W.	51	49
All Sections	59%	41%
OIL FURNACES WITHOUT BURNERS		
New England	11%	89%
Mid-Atlantic	44	56
South Atlantic	62	38
Midwest	55	45
Pacific N. W.	23	77
All Sections	40%	60%
COMMERCIAL-INDUSTRIAL OILBURNERS		
New England	78%	22%
Mid-Atlantic	82	18
South Atlantic	31	69
Midwest	79	21
Pacific N. W.	74	26
All Sections	77%	23%

TABLE 8 carries this line of thought one step further. Here we have not paid any attention to the total sales volume of the individual companies but rather we have lined up these companies into groups representing their individual highest dollar volume. For example, we put into one group all of the companies whose major dollar volume is in oilburner equipment and we found that they sold in 1953 an average of 101 oilburners. We also found that that group represented 36% of all oilburners installed during the year. Down the column a ways we find a group made up of all those companies whose largest dollar volume is in fueloil sales. We discovered that where they sell oilburners the average such company sold 85 in 1953 but that as a group they accounted for 46% of all oilburners sold.

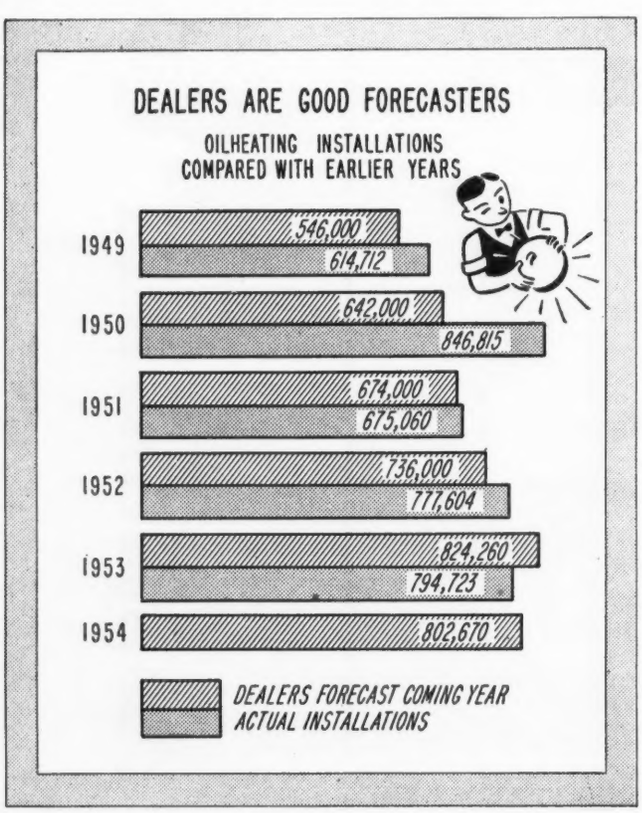
Now in the lower part of TABLE 8 we have a little different meaning. We saw above that among those companies whose principal business is fueloil, 46% of all oilburners were sold. Now we find in the lower tabulation that 72% of all oilburners were sold by companies that were also in the fueloil business. The difference between the 46% of the upper portion of the table and the 72% of the lower portion of the table is accounted for by companies who sell fueloil in a smaller way, companies who do not have their principal volume in oil.



Oilburner prices (chart on page 66) continue to be too low on the average, year after year. Notice in the chart that the consumer paid in 1953 $368 on the average for a conversion burner installation with one basement tank. That represents a small decline from $375 the previous year. In the face of this $7 drop in the selling price his costs were up. A dealer paid $112 for the average conversion burner compared to $118 the year before—a $6 saving. But to offset that he spent $158 for installation materials and labor compared with $151 the previous year. And so he wound up with a gross profit of only $98 compared with $106 in 1952 and out of this he has to pay his overhead and sales expense before he gets a net profit.

Naturally this type of dollar situation does not apply to all dealers. Some of them are such thorough merchandisers that they sell their jobs for $100 more. On the other hand some sell at nearly $100 less than the average so we must measure the general economic health of oilheating sales by the weighted average figure.

One factor in the cost of doing business as brought out in some detail in TABLE 9 and in the chart alongside also illustrates this quite clearly. There has been a lot of confused thinking in the industry over whether or not dealers continue to buy oilburners direct from the factories in significant volume. We find that they buy 56% of all conversion burners direct from factories, 51% of oil boilers containing burners and 59% of oil furnaces with burners direct from factories. In the commercial-industrial field the direct factory percent, understandably, is much higher at 77%.



One significant point to understand here is that these percentages are not based alone on the buying habits of the reporting dealers. We have done that in previous years and come up with some impressions that we felt favored the direct factory ratios. The reason for this was that the dealers who will cooperate in these studies, whether they be large or small dealers, are normally the more alert type, the better businessmen.

This time we asked them to give us an estimate of the total activity in their markets on each of the points covered in the table. It is true that what we have here is a compilation of estimates only, but when you put together several hundred intelligent estimates the margin of error tends to become quite small and you get very close to the facts.

TABLE 10

Dealers expect Status Quo

(forecasting oilheating sales 1954 vs. 1953)

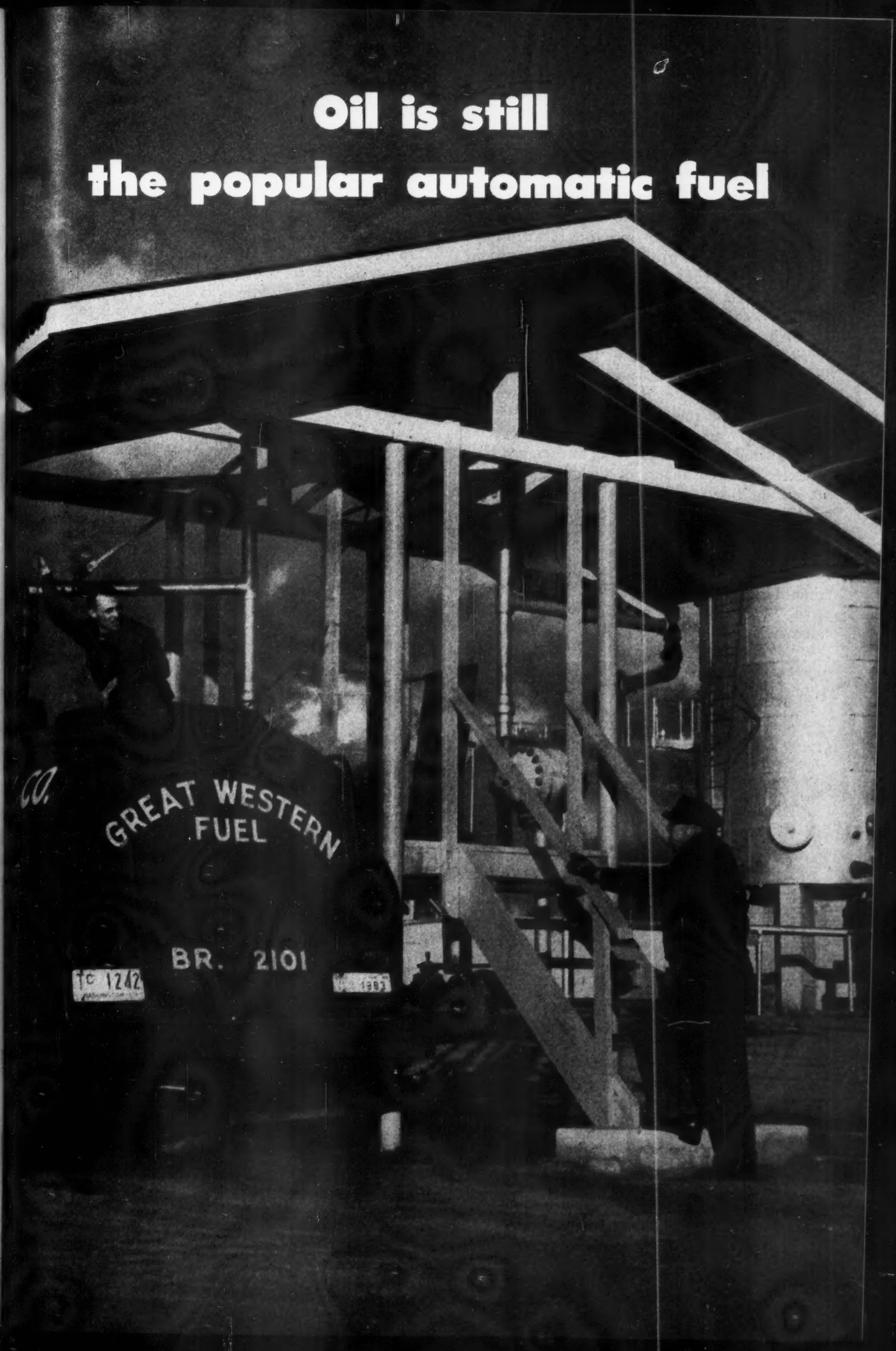
New England	+ 1%
Mid-Atlantic	+ 1
South Atlantic	+ 8
Midwest	+ 6
Pacific Northwest	—14
All Sections	+ 1%

One of the most interesting aspects of this annual study is the dealers' forecast what their sales are going to be in the year ahead. Take a look at the chart and notice that for several years this has been a very effective guide to what is coming. In only one of the past five years did they estimate too high compared with what actually happened and in that instance they were not far wrong. Only in 1950 did they estimate too low by any great margin. You will notice that throughout his whole experience the dealer's tendency is to be extra conservative and underestimate the market rather than over estimate it.

TABLE 10 shows by sections of the country the dealers' forecast for 1954 oilheating sales. The Pacific Northwest expects a very serious drop largely because of the high degree of saturation in that country. Including that section the dealers nationally expect that business will be up 1%.

If we limit the forecast to the area East of the Rockies the dealers expect oilheating sales to be up 3% in 1954. In the December issue of FUELOIL & OIL HEAT was a forecast made by 300 reputable sales economists identified with "Sales Management" magazine. This group estimated that oilheating sales will be down 3% in 1954. In former years they have been quite close to the truth in their crystal ball activities.

Thus from the dealers as well as from the professional analysts we get the feeling that 1954 oilheating installations will be substantially the same as in 1953. If there is a slight easing off in general business indexes our industry apparently expects to make it up by more intelligent and vigorous selling. In all probability they are right, so we should go ahead with commitments based on no expectation of a let down.


Oil is still
the popular automatic fuel
GREAT WESTERN
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Fueloil Business keeps growing

Whatever the size of the new burner Crop, Oil Volume always rises

THE FUELOIL DISTRIBUTOR has a marked advantage over most kinds of business because his industry in every year since the start of oilheating has continued to grow. Fortunately, 1953 was an excellent year for oilburner installations but even if it hadn't been the oil man would still have gained a lot of new customers. In some years when oilburner installations have fallen sharply from the previous year, for example in 1948, the oilburner dealer and manufacturer had some first-class headaches. But the fueloil men went serenely ahead with a comfortable increase.

Obviously, we are not referring to every individual fueloil man because some of them may have neglected their customers or their business operations to their detriment, but when an industry as a whole makes significant gains each year it certainly provides a fertile pasture for those who work at it.

The year just ended was no exception. We see in TABLE 1 that the heating oil volume of fueloil distributors throughout the nation was 12% above 1952. By sections of the country there was considerable variation. The Far West showed the least gain. Most of its major cities are pretty well saturated with either oil or gas heating. Of course, some of the variations between sections are due to weather conditions but we have yet to see a year in which the weather was so abnormal that the industry recorded no gain.

TABLE 1

Fueloil Distributors Grew 12%

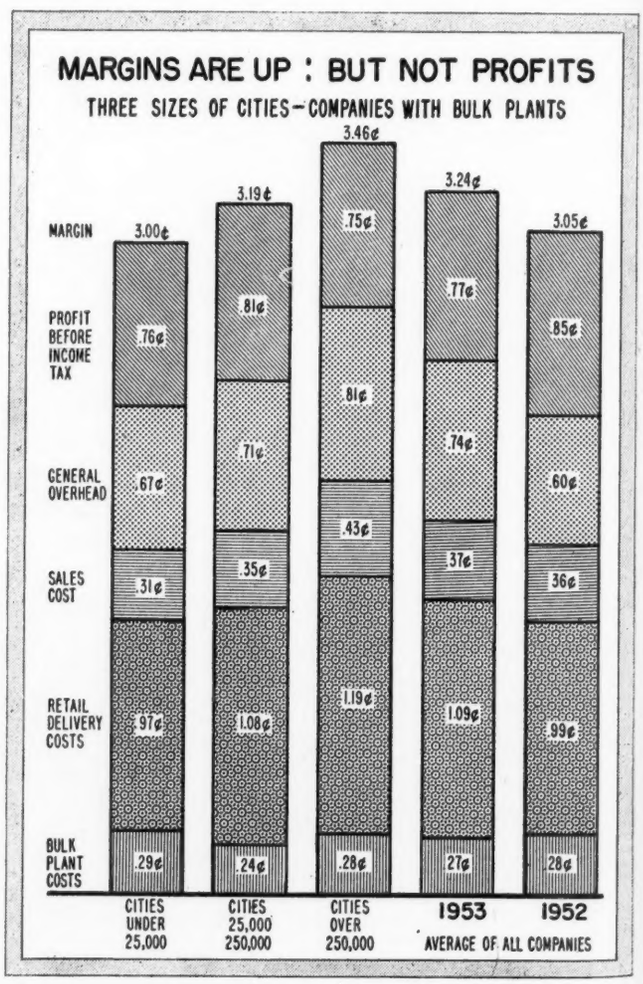
	1953 vs. 1952
New England	+ 9%
Mid-Atlantic	+16
South Atlantic	+10
Midwest	+10
Far West	+ 2
All Sections	+12

The most important single interest of fueloil distributors is naturally margins and profits. TABLE 2 brings some detail on margins by sections of the country. These are separated to size of cities. Small cities are those with less than 25,000 population; medium cities have 25,000 to 250,000 population and large cities are those over 250,000. Where you see a blank space with two dots in this table as in all other tables it means that there were not enough companies reporting from that segment to be representative. As an example very few companies in small cities are able to operate without bulkplants. Then the returns from the South are nearly all from the medium-sized cities since that section has very few above 250,000 and few of the fueloil distributors are located in the small towns.

The large chart shows at a glance that margins during the year were up but net profits per gallon were down. When we speak of net profits in this instance as in all other instances in this annual analysis we mean net profits before income taxes. In 1952 the average of all fueloil distributors had a margin on No. 2 oil of 3.05¢. In 1953 this has gone up to 3.24¢. This was a rise of 6%. At the same time operating costs rose from 2.20¢ to 2.47¢ or in other words costs went up 12%. Net profit for the country as a whole on No. 2 oil was .77¢ compared with .85¢ the previous year.

Notice in the chart that there is a step-up in average margins corresponding with the increase in the size of the cities. This is as it should be since the larger city normally has much higher operating costs than the smaller ones.

There is also some relationship between margins and size of company. We have not shown that breakdown this year although we did last year. Everything considered the most profitable operation appears to be in medium-sized cities just as the year before we had shown it to be among medium-sized companies, which we had designated as those



companies selling between one and three million gallons of No. 2 oil.

We find more detail on operating costs and profits in TABLE 3. New England continues to have the highest margin but not the highest profit. Notice the similarity between New England and the Pacific Northwest on this point. Those two areas have substantially higher general overhead costs than the rest of the country. The indications are that because margins are more liberal in those sections the management is inclined to pay itself higher salaries. This is to be expected since they have a more secure feeling in being able to do it with the stronger margins.

Notice that in the South Atlantic states where we have the lowest average margins this year we have the lowest general overhead and the lowest selling cost. The result has been the highest per gallon profit.

Most fueloil distributors feel that when their profit on No. 2 oil is under 1¢ a gallon before taxes it is not high enough. They feel that the growth of the industry keeps increasing their needs for working capital to a point where they cannot keep up with these demands without a significant profit to plow back into the business. There is obviously a lot of truth in this so we may expect during 1954 somewhat greater pressure for higher margins than we had during 1953.

One interesting factor in the general profit picture shows up in TABLE 4 where we see that 14% of the fueloil distributors in the nation sell No. 2 oil above the so-called posted prices of the major companies. This is more prevalent in the Pacific Northwest where it is almost universal in the large cities. However, the Mid-Atlantic section is beginning to make a fine showing on this point.

It is inevitable that through the years ahead the fueloil industry will accelerate this tendency to set its own tank wagon prices based on what it needs for profit, while departing from the old concept of a fixed margin. It is far more practical to do this with fueloil than it would be with gasoline where every company's prices are publicly posted. You can hardly go into a service station without noticing what gasoline sells for.

The lower part of TABLE 4 brings out another point that has a significant bearing on operating costs and profits. Approximately 40% of fueloil distributors use a bracket pricing system or in other words they raise the price for smallest tanks and drop it for large ones. We have done considerable writing on this subject including one rather extensive analysis during the past year.

This differential pricing is a fine idea if you work at it. Everyone is benefited by a half cent discount with a large tank providing the fueloil distributor puts forth some effort to get customers to increase their storage capacity. Where this is done the company gets real economy in deliveries through large drop sizes. On the other hand if a fueloil distributor has only a few of the large tanks to serve he is simply giving away profits through price reduction. Notice in the table that the Pacific Northwest leads all other sections in this activity.

Quite a number of fueloil distributors do make an effort each year to sell extra tanks to raise the storage capacity of existing customers. This is shown in TABLE 5 where we see that nearly 55,000 tanks were sold for this purpose. The Midwest is doing the best job in this direction. The average price charged the customer for installing an extra 275 gallon tank in his basement was $71 in 1953, compared with $68 the year before. Where he

TABLE 2

Fueloil Margins No. 2 Oil

In Cents Per Gallon

	WITH BULKPLANTS			WITHOUT BULKPLANTS		
	Small Cities	*Medium Cities*	*Large Cities*	*Small Cities*	*Medium Cities*	*Large Cities*
New England	3.24	3.41	3.50	..	3.43	3.48
Mid-Atlantic	2.94	3.24	3.36	3.23	2.83	3.17
South	..	2.99	..	..	3.03	..
Midwest	2.97	3.15	3.37	..	..	..
Pacific Northwest	3.00	2.78	4.08	..	3.30	3.68
All Sections	3.00	3.19	3.46	..	3.04	3.32

TABLE 3

Profit before Income Tax .77¢ per Gallon

	New Eng.	*Mid-Atl.*	*So. Atl.*	*Mid-west*	*Pac. N. W.*	*All Sec.*
Bulkplant Cost	.23¢	.25¢	.31¢	.35¢	.23¢	.27¢
Delivery Cost	1.07	1.11	1.02	1.07	1.17	1.09
Selling Cost	.46	.35	.21	.38	.37	.37
General Overhead	.88	.68	.48	.71	.95	.74
Total Cost	2.64	2.39	2.02	2.51	2.72	2.47
Margin	3.40	3.20	2.99	3.18	3.37	3.24
Profit	.76	.81	.97	.67	.65	.77

TABLE 4

One-seventh Sell above

MAJOR POSTINGS

	RELATION TO POSTED PRICES	
	Above	*Below*
New England	7%	2%
Mid-Atlantic	13	3
South Atlantic	..	..
Midwest	4	..
Pacific N. W.	60	8
All Sections	14%	2%

PERCENT OF DISTRIBUTORS USING LARGE TANK DISCOUNTS

New England	52%
Mid-Atlantic	40
South Atlantic	..
Midwest	24
Pacific N. W.	88
All Sections	40

TABLE 5

Extra Tanks sold to raise fueloil storage Capacity

	Number Sold	PRICE 275 gal.	PRICE 550-675 gal.
New England	5,611	$63	$138
Mid-Atlantic	11,225	79	138
South Atlantic	5,303	88	135
Midwest	20,469	66	127
Pacific N. W.	12,093	52	108
All Sections	54,701	71	132

switched the customer from a small tank to a large one by selling a buried tank of 550-675 gallon size he charged on the average $132, and this is down from $140 the previous year.

Of course it does not pay the customer to make this switch, at least in a short period. To justify a $71 investment on a half-cent saving he has to buy over 14,000 gallons which means an 8 or 10 year supply.

Surprisingly, however, fueloil distributors who have made a serious effort have been able to put in a lot of these extra tanks and the customer pays for them. There is a psychological factor involved. The average person is unhappy over the prospect of having to pay a premium price for anything over a period of years ahead. In these days when $71 is not too hard to find many customers will spend it just to feel that they are getting themselves into the most economical position for future years.

Rarely do they have to pay for this tank in one billing. Most companies who make a drive on this business are willing to spread the cost of the extra tank over quite a number of future bills until it is paid out.

The average No. 2 fueloil customer at the end of 1953 had storage capacity of 399 gallons compared with 394 the previous year. TABLE 6 shows this by sections of the country. Notice that the Pacific Northwest has the best record on this score. In that part of the country they do not use 550 gallon tanks for the larger size; instead they use 675 gallons. Notice that more than one-third of their customers have this large tank and that pulls their overall average up to 463 gallons.

New England has done the worst job in building consumer storage capacity. This may be because so much of New England is oilheated that the trucks can operate almost like a milk route.

The 399 gallon average tank naturally helps some in keeping up average drop sizes but TABLE 7 shows that the industry is rather lax in this whole business. When an average drop, nationally, is only 52% of the average tank capacity we can clearly recognize that the industry has a long way to go in refining its operation of fueloil distribution.

There are a few of the best managed companies in the country that will average as much as 209 gallon drops in 275 gallon tanks. That is a mark to shoot at. Certainly it should be possible to get the average drop size up to 75% of tank capacity. That would mean on the average a 300 gallon drop in the average 399 gallon storage capacity.

The opportunity for this keeps improving if we want to work at it. Automatic deliveries now serve 82% of all central heating oil customers. You will notice in TABLE 8 that this has come up from 74% two years ago. You will also notice in the table that 86% of fueloil distributors have automatic delivery systems. This percent would naturally be higher than the percent of all customers thus served because only a few companies have 100% of their folks on degree day operations.

At the same time the high percent, both of companies and of customers, very clearly shows that the delivery of fueloil is almost entirely under control of the oil company rather than its customers. Under that condition the industry certainly must recognize that it has much opportunity to improve its delivery efficiency, particularly in the matter of drop sizes.

We also notice in this table that the use of VENTALARM signals is very high in the New England and Mid-Atlantic parts of the country, and that the

TABLE 6

Customer Tanks, No. 2 Fuel, Average 399 Gallons

	New Eng.	Mid-Atl.	South Atl.	Mid-west	Pac. N. W.	All Sec.
PER CENT OF ALL TANKS WITH CAPACITIES						
220-275 gallons	89	70	61	76	61	76
550-675 gallons	7	19	30	16	34	18
1,000 or more gallons	4	11	9	8	5	6
AVERAGE STORAGE CAPACITY PER USER	327	418	432	381	463	399

TABLE 7

Tank Capacity vs. Drop Sizes

	Aver. Tank Size	Aver. Drop	Drop % of Capacity
New England	327	181	55%
Mid-Atlantic	418	213	51
South	432	268	62
Midwest	381	190	50
Pacific	463	250	54
All Sections	399	209	52

TABLE 8

Automatic Deliveries Gaining

	New Eng.	Mid-Atl.	So. Atl.	Mid-west	Pac. N.W.	1953 All Sec.	1951 All Sec.
Percent Companies using auto. systems	84	97	70	80	63	86	81
Percent all fueloil users served	89	87	64	75	77	82	74
Percent of all tanks with VENTALARM signals	82	71	4	5	2	46	45

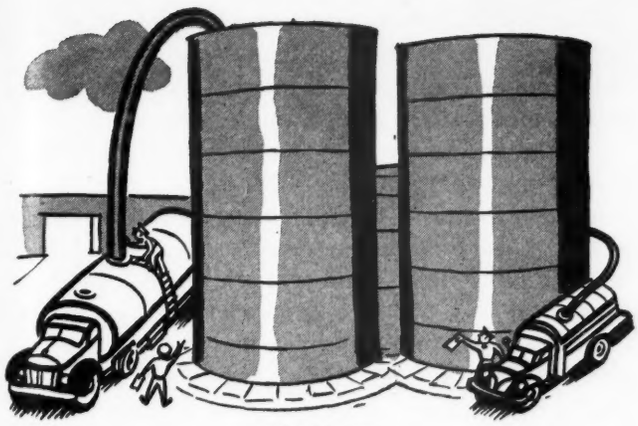


TABLE 9

Storage Turnover 17 Times

	1953
PERCENT OF FUELOIL DISTRIBUTORS	
with No. 2 oil storage	69
with Kero., No. 1 oil storage	57
with residual oil storage	6
AVERAGE BULK STORAGE CAPACITY	
Thousand gallons	
No. 2 oil	172
Kero., No. 1 oil	43
Residual oil	438
ANNUAL SALES RELATED	
to No. 2 oil storage:	
Turnover times	17

total has reached approximately half of all central heating accounts in the nation.

Another factor having to do with the profits of a fueloil distributor is shown in TABLE 9. The early part of the table simply shows physical characteristics of the industry in relation to its bulkplants. The significant thing in the table is that in 1953 the average fueloil distributor had a turnover of his No. 2 oil storage capacity 17 times. He probably turned it over more times than that so far as his actual stock is concerned because at no time would his tanks be entirely filled.

The 17 times turnover that we show is simply a division of his total sales by his bulk storage capacity. It hasn't been so many years since ten times was considered a good turnover. What's been happening, of course, is that as the volume of fueloil sales has grown the average fueloil distributor has not increased his fueloil capacity in proportion.

It is reasonable that he should not do it unless he has some kind of compensation to justify the expense. Most fueloil distributors who have their own bulkplants are getting their oil today by over-the-road transports. This provides quick delivery at a cost lower than the railroads and it can also be very frequent.

We know of a few companies where transports operate through the night to fill bulkplants that will be practically drained dry during the day. In a situation of this kind the only bulk storage needed would be that amount immediately required by the bulk delivery method plus a reasonable cushion for bad storms that might block the highways. Almost never do these storms tie up traffic more than a week.

We have often indicated that the average fueloil distributor should have storage equivalent to about 10% of his annual sales but the way things are going these days it looks like 6% is nearer the actual pattern.

One of the interesting high-speed developments in the marketing of fueloil has been the growth of the acceptance of budget plans by fueloil distributors. This is shown in TABLE 10 and we now see that 75% of the companies are proposing such a plan to their customers. In 1950, or only four years ago, we had less than one-third of the companies working with customer budgets.

The unhappy part of this picture is that the customers have not been as enthusiastic as the oil man. Only 14% of customers pay for fueloil in equal monthly amounts while a year ago they numbered 16%. Of course the actual number of customers on budget plans has increased during the year because so many more companies offered this facility in 1953. It is possible in some instances to get many more customers on budgets if the fueloil distributor actually wants them. We know of occasional situations, unusual to be sure, where the companies have 75% or more of their total customers on monthly budget payments for fuel.

In the lower part of TABLE 10 we see that considerably more than half of all companies use a ten month budget program and again more than half start the program in either September or June. A number of other months of the year come in for minor percentages but you can be reasonably sure that the majority of companies have settled on plans that they have found worked out best in practice. It looks like a ten month plan starting in either June or September pleases the customers best.

TABLE 10

Budget Plan Keeps Growing

	Percent of Distributors Using	*Percent their Customers*
New England	68	16
Mid-Atlantic	72	13
South Atlantic	70	8
Midwest	88	12
Pacific N. W.	68	22
1953 Total	75	14
1952 Total	65	16
1951 Total	57	10
1950 Total	32	10

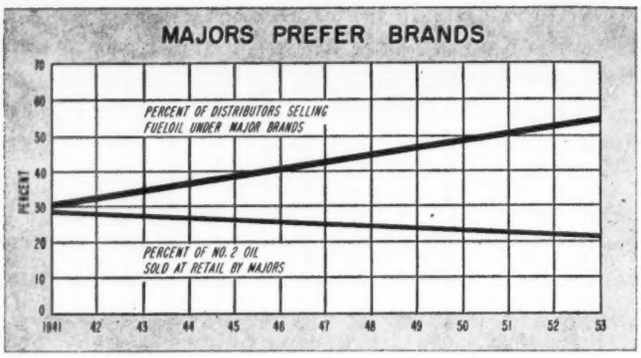
They run how many Months?

10 months	61%
12 months	20
9 months	11
11 months	3
8 months	3
6 months	2

What month do they Start?

September	31%
June	29
August	13
July	11
May	7
October	3
April	2
January	2
Any Time	2

One great advantage in the budget plan, of course, is that it not only keeps credits in line but, just as important, it provides some extra working capital during the first half of the season. That would be reason enough to make a real drive to get a maximum number of budget users.



Some companies are getting burner service contracts included in their budget payments . . . in fact one-fourth of all companies using budgets do some of this. One company in the East has 4,000 customers that include the annual service program in the budget contract. It is a wonderful idea to the extent that it can be worked out because by that method the customer feels that oilburner service is included in the fueloil cost which is where some important industry men feel it should be.

The major oil companies continue to sell just over one-fifth of the nation's requirements of No. 2 heating oil at the retail level. This has not changed for the past three years although you will notice in TABLE 11 that it has dropped from 29% in 1941 to 22% at the present time. In the early days of the oilheating industry the major companies naturally sold practically all of the oilheating oil direct. Their percentage has steadily declined as independent fueloil distributors have started business in all oilheating communities and in most instances these independent companies have tied oilburner sales and service to their fueloil marketing.

At the end of 1953 we find 53% of all fueloil distributors operating under the flag of some major company. In other words they show on their trucks in prominent form the name of the major company that supplies them. You will notice in TABLE 12 that there has been no significant change in this situation in the past three years although the chart points up the fact that there has been an important rise in the situation since the prewar period.

Notice in the table that the percent of companies operating under major brands is identical with the percent of all fueloil customers they serve. There has been quite a significant increase in their share of total customers in the past three years. The 1952-53 ratios, however, indicate that this curve may have straightened out and that the present ratio may be about the peak. When we have a wide open market with plenty of supply from many sources some companies feel that there is less reason to be definitely identified with one supplier.

The average residential user of No. 2 oil consumed only 1448 gallons in 1953. The average of all types of No. 2 oil users burned only 1595 gallons. This is shown in some detail in TABLE 13 and the figures represent the all time low point for average consumption.

There are two reasons for this. First, 1953 was

TABLE 11

Majors' sell a Fifth

	Percent of total No. 2 Fueloil sold at retail by major Companies
New England	13%
Mid-Atlantic	22
South Atlantic	14
Midwest	34
Pacific Northwest	14
1953 All Sections	22%
1951 All Sections	22
1941 All Sections	29

TABLE 12

53 Percent Major Brands

	Percent of all Fueloil Distributors showing	*Their Share of all fueloil Customers*
New England	41%	29%
Mid-Atlantic	52	52
South Atlantic	50	53
Midwest	60	63
Pacific Northwest	63	75
1953 All Sections	53	53
1952 All Sections	55	52
1951 All Sections	52	45

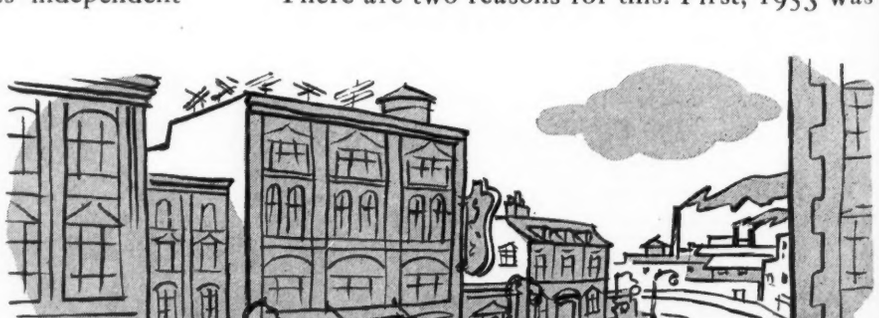


TABLE 13

No. 2 Oil Customers burned 1,595 Gallons

	New Eng.	*Mid-Atl.*	*South Atl.*	*Mid-west*	*Pac. N. W.*	*All Sec.*
AVERAGE CUSTOMERS PER DISTRIBUTOR						
Residential, No. 2 Oil	1,200	1,382	1,263	1,671	1,918	1,470
Commercial-Apartment, No. 2 Oil	51	65	30	80	118	70
Kero., No. 1 Oil	395	151	858	725	1,859	549
No. 4-5 Residual	22	34	7	54	76	40
No. 6 Residual	14	86	..	15	19	44
AVERAGE GALLONS PER CUSTOMER						
Residential, No. 2 Oil	1,456	1,513	1,181	1,524	1,130	1,448
Commercial-Apartment, No. 2 Oil	5,340	5,521	6,664	3,156	4,291	4,845
Combined types, No. 2 Oil	1,614	1,693	1,308	1,599	1,313	1,595
Kero., No. 1 Oil	565	933	681	693	646	767
No. 4-5 Residual	24,254	19,629	22,272	14,912	18,061	19,238
No. 6 Residual	..	..	..	..	..	39,690

an abnormally warm year and, second, the characteristics of the new homes, or rather the homes of new customers, have changed through the years. New home users account for nearly 40% of our total in these years and, of course, most of those are small and very well insulated. Then as we broaden the base of oilheating, by which we mean getting into lower income types of families, we find that the average home size is smaller.

It is doubtful if we will ever go back to a year in which the average consumption of No. 2 oil for heating will exceed 1750 gallons. In the years before World War II the average was 2100-2200 gallons.

In the same table we notice that we are working in this annual analysis with companies that average about 1500 customers burning No. 2 oil and who sell an average of two and one-third million gallons of that product. This would not be representative of the large number of companies who are primarily in the gasoline business and sell just an incidental amount of central heating oil.

In other words most fueloil is sold by companies that are primarily in the fueloil business and if they are in the gasoline business it is only incidental. These are the typical companies that make up this study.

The wage rates of truck drivers went up nearly 14% on the average in 1953. TABLE 14 shows these rates in detail by sections of the country and by sizes of cities. The 1953 increase has had a great deal to do with the rise in operating cost we saw in the large chart in the early part of this article. There is one logical result of this increase in wage rates. Our industry will find it easier to attract good men and easier to hold them.

As a matter of fact we now find in TABLE 15 that something over half of all fueloil truck drivers are retained by their companies throughout the year. A little over a third of the reporting companies keep all their men. They find quite a number of ways to use them in the light season, such as rebuilding and repainting trucks. Among all truck drivers employed in the country today about 26% work through the summer months in the service and installation departments . . . that represents almost half of all the drivers that work all year.

The average fueloil distributor today operates 6.2 trucks of all types, but more significantly he operates 4.4 trucks exclusively on No. 2 oil. Next TABLE 16 shows the trends in fueloil truck sizes by

TABLE 14

Truck Drivers' Wage Rates Per Hour

Average of all reporting Distributors

	SMALL CITIES		MEDIUM CITIES		LARGE CITIES		PERCENT UNION	
	Best Men	*Lowest*	*Best Men*	*Lowest*	*Best Men*	*Lowest*	*Shops*	*Men*
New England	$1.58	$1.51	$1.60	$1.47	$1.70	$1.53	16	41
Mid-Atlantic	1.73	1.63	1.79	1.71	1.94	1.74	24	52
South Atlantic	..	..	1.48	1.18	..	..	..	..
Midwest	1.90	1.61	1.75	1.71	2.13	1.96	47	44
Pacific Northwest	1.96	1.88	1.96	1.86	2.19	2.14	80	90
1953 All Sections	1.77	1.62	1.75	1.65	1.97	1.80	35	52
1952 All Sections	1.58	1.49	1.53	1.37	1.76	1.47	..	..
1951 All Sections	1.47	1.29	1.42	1.25	1.60	1.41	..	..
1950 All Sections	1.26	1.09	1.41	1.14	1.58	1.27	..	..

TABLE 15

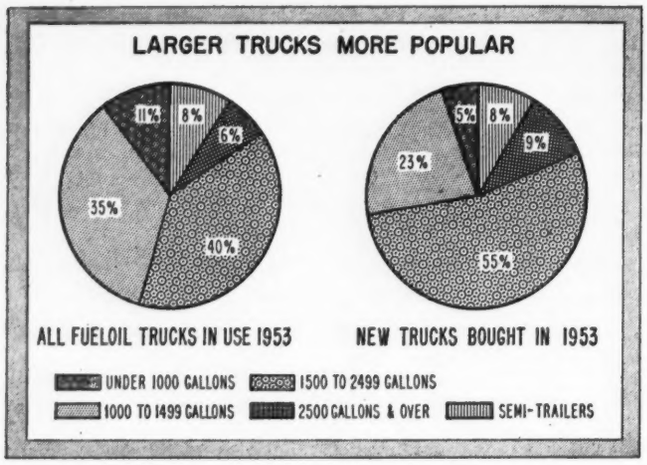
Majority of Drivers all Year

	Percent of companies keep all men	*Percent of all drivers Year round*
New England	28	54
Mid-Atlantic	40	60
South	40	67
Midwest	35	51
Pacific Northwest	13	46
All Sections	34	56

TABLE 16

Fueloil Trucks Deliver 500 Gallons Per Hour

	New Eng.	*Mid-Atl.*	*So. Atl.*	*Mid-west*	*Pac. N.W.*	*All Sec.*
TRUCKS OPERATED PER DISTRIBUTOR						
No. 2 oil	3.5	4.2	1.9	5.9	4.6	4.4
Kero., No. 1 oil	1.3	1.4	2.5	2.4	5.8	2.1
Residual oil	2.0	2.4	1.0	2.3	1.8	2.2
Over-the-road Transports	2.8	2.3	3.0	3.2	1.2	2.5
All Types	4.7	5.0	4.6	8.8	8.6	6.2
Percent operating Transports	14	6	20	36	26	18
PERCENT OF TRUCKS IN USE, BY SIZE						
Under 1,000 gallons	12	4	24	19	11	11
1,000 to 1,499 gallons	29	28	53	39	54	35
1,500 to 2,499 gallons	44	50	7	31	30	40
2,500 gallons and over	6	10	2	1	1	6
Semi-trailers	9	8	14	10	4	8
PERCENT OF NEW TRUCKS BOUGHT IN 1953						
Under 1,000 gallons	7	5	..	5	..	5
1,000 to 1,499 gallons	25	18	59	21	24	23
1,500 to 2,499 gallons	46	45	41	74	76	55
2,500 gallons and over	14	15	..	..	..	9
Semi-Trailers	8	17	..	..	..	8
CUSTOMERS SERVED PER TRUCK, NO. 2 OIL	348	344	370	303	411	343
AVERAGE GALLONS PER DROP, NO. 2 OIL	181	213	268	190	250	209
Kero., No. 1 oil	54	86	91	107	78	85
No. 4-5 Residual	2,028	1,783	..	1,886	1,336	1,807
No. 6 Residual	4,040	3,370	..	4,100	2,678	3,611
GALLONS DELIVERED PER HOUR	503	511	544	488	456	500



different parts of the country. This is further made clear in the pie chart that compares all existing trucks for size with the new ones bought during the year. The trend continues definitely up in sizes, with more than half of all those bought in 1953 being in the 1500-2500 gallon bracket.

TABLE 17

56 Gallons per Truck Mile

	Annual Miles	*Annual Gallons*	*Gals. Delivered Per Mile*
New Eng.	10,620	561,672	53
Mid-Atl.	8,256	582,392	71
So. Atl.	7,545	483,960	64
Midwest	12,432	484,497	39
Pac. N. W.	13,329	539,643	40
All Sec.	10,167	544,230	56

Next we see that the average fueloil truck operating for No. 2 oil took care of 343 customers during the past year. The year before they had taken care of only 310 customers but they supplied more oil to the average customer. In other words the average fueloil truck in 1952 delivered 551,000 gallons while in the year just ended the figure was 544,230.

As we had noted before, the average company delivered 209 gallons per drop to No. 2 oil customers in 1953. This shows a decline from 221 gallons average in 1952. The main reason for the drop is that the average customer used fewer gallons and the companies were not able in a single year to make the necessary adjustments for better utilization of the trucks.

TABLE 18

Fueloil Customers Lost

	To Gas	*To Electricity*	*To Coal*
New England	5,102	..	126
Mid-Atlantic	11,967	99	66
South	2,259	179	107
Midwest	20,669	183	230
Pacific	3,221	2,818	39
All Sections	43,218	3,279	568

Losses to all Fuels

1953	47,065 or 0.7%	of total operating
1952	32,734 or 0.6%	"
1951	50,830 or 1.0%	"
1950	68,256 or 1.5%	"

One of the most effective measurements of efficiency in fueloil distribution is the number of gallons delivered per mile of truck operation. This is shown in TABLE 17 to have been 56 gallons. The sectional variations are not as wild as they seem. They should not be used to conclude that the average operation in the Mid-Atlantic states is nearly twice as efficient as one in the Midwest. The Mid-Atlantic operations are on the whole larger and their accounts much more concentrated.

In the Pacific Northwest where we have another low figure a good part of the reason is that many of the companies load their trucks at distant tidewater bulkplants from the major suppliers so they drive a considerable distance each day without making house to house deliveries. This situation is changing as many of those companies are now building bulkplants of their own but it still causes the all over figure to be low.

As an industry we lost a little over 47,000 customers to other fuels in 1953. We gained eight times as many from other fuels. Of course, the relative few that we lost went to gas and electricity while the large number that we gained came almost entirely from coal. Even so, if we can hold anything like that ratio for the next several years we will continue to be in fine shape.

When we lose a customer to another fuel it is obviously a dissatisfied customer. That means that we could prevent practically all of this by making our people completely happy. On the other hand our actual losses are considerably below 1% of the total number operating so we don't have to be much concerned. It is far more important to keep fueloil customers happy so that they will reflect this satisfaction in their communities and in that way discourage the growth of gas into new homes and into conversions from coal.

Our best market has always been conversions from coal. We want to keep it that way. In all probability we can do it for some years because we now recognize more than ever that gas is a threat to our investments and our profits and we will take the necessary steps to hold it in line.

For each customer *lost to other fuels we gained eight from other fuels.*

More service is tied to oil

Service Conditions improve

Customers benefit as fewer Companies lose Money and Men earn more

FOR MANY YEARS the service department has been one of the less happy segments of the oilheating dealer's business. The smartest operators have, of course, recognized that the customer contacts they get through the service department help to improve their stature in a community, providing that they actually please the oilheating users in all of this work.

More companies, however, have considered service simply as a necessary adjunct to being in business. Because it was rarely profitable they have been inclined to hold down the wage rates of the department employees. As a result it has been increasingly harder to find enough good men. That has been the picture.

During the past couple of years there has been a noticeable improvement or a definite shift away from this negative viewpoint. The several hundred dealers reporting in this annual industry analysis quite clearly show from their figures, rather than from any explanation, that they are taking a much more constructive view of the whole service facility.

The reporting group through their service departments took care of an average of 1,128 residential oilheating users in 1953. There was some variation by sections of the country as is shown in TABLE 1 but not too much.

Some very large dealers claim that they can't operate a profitable service department at a low charge to a customer unless they have a minimum of 4,000 accounts. This study on the other hand would not bear that out. We see in TABLE 2 that the smaller companies have a better chance for net profit from their service departments than do the larger ones. We find that 58% of companies operated this department at a profit in 1953. They had an average service billing of $16,000 and they made a profit of $2,000 on this. The 42% of companies who lost money had an average billing of $29,000 and they lost $3,000.

Putting the whole lot together it came out almost an even break . . . actually the total reporting group lost one-tenth of one percent of its service billing.

This is a distinctly healthy situation. Not many companies believe that service should carry a substantial profit but at the same time they feel that it should definitely not lose money. Considering the industry as a whole, the balance seems to have been reached.

Notice back in TABLE 1 that oilheating service departments in many instances do not confine their activities to residential burners. We find that 38% of these departments also supply service for residual oilburners handling No. 5 or No. 6 oil. The

TABLE 1

The Oilburners They Service

	New Eng.	*Mid-Atl.*	*So. Atl.*	*Mid-West*	*Pac. N.W.*	*All Sec.*
Average Numbers burners per dealer	1,225	1,335	787	733	1,290	1,128
Percent service departments handle residual oilburn'rs	29%	49	9	27	50	38%
Av. number residual oilburners	47	71	30	58	26	57

TABLE 2

Smaller Service Departments do Better

ALL COMPANIES, ALL SECTIONS, LOST ONE-TENTH OF ONE PERCENT

	Percent of Companies	*Average Service Billing*	*Average Service Profit*	*Percent of Companies*	*Average Service Billing*	*Average Service Losses*
New England	39%	$11,000	$1,000	61%	$28,000	$3,000
Mid-Atlantic	58	16,000	3,000	42	42,000	5,000
South Atlantic	86	17,000	2,000	14	18,000	2,000
Midwest	75	11,000	1,000	25	16,000	2,000
Pacific N. W.	28	36,000	1,000	72	16,000	1,000
All Sections	58	16,000	2,000	42	29,000	3,000

TABLE 3

Service Relationship to Fueloil

	New Eng.	*Mid-Atl.*	*So. Atl.*	*Mid-West*	*Pac. N.W.*	*All Sec.*
Percent of all service departments that are in fueloil companies	78%	77	55	39	70	66%
Percent of all oilheating users serviced by fueloil distributors	90%	91	68	45	78	77%
Percent of service departments serving only oil custmers	20%	19	9	11	..	15%

TABLE 4

Equipment Sales through Service

	New Eng.	*Mid-Atl.*	*So. Atl.*	*Mid-West*	*Pac. N.W.*	*All Sec.*
Service department leads brought this share of total sales	10%	10	10	10	8	10%
Service men got this commission	5%	4	3	5	3	4%

TABLE 5

Men specialize more

TOTAL UNITED STATES

Number of men	*1953*	*1952*
Exclusively service	10,556	5,487
Exclusively installation	9,234	4,561
Comb'n inst'n & service	17,018	24,380
Total men	36,808	34,428

TABLE 9

Favorable Annual Incomes, 1953

FOR INSTALLATION AND SERVICEMEN

	Large Cities	*Medium Cities*	*Small Cities*	*All Cities*
New England	$5,583	$4,756	$3,507	$4,651
Mid-Atlantic	5,007	4,695	4,210	4,730
South Atlantic	..	..	..	3,170
Midwest	5,194	5,113	4,092	4,804
Pacific N. W.	..	..	..	5,160
All Sections	5,179	4,831	4,032	4,684

TABLE 6

Payment to Service Department

FOR FIRST YEAR WARRANTY

	New Eng.	*Mid-Atl.*	*So. Atl.*	*Mid-West*	*Pac. N.W.*	*All Sec.*
Percent of companies who pay this	36%	26	11	20	40	27%
Average payment	$19	20	20	14	16	$18

TABLE 8

Unions in Oilheating

INSTALLATION AND SERVICE

	Percent of Companies	*Percent of Men*
New England	5%	5%
Mid-Atlantic	11	34
South Atlantic	20	23
Midwest	31	25
Pacific N. W.	60	60
All sections 1953	20	29

TABLE 7

Service and Installation Wage Rates Are Up

		INSTALLATION MEN		——SERVICEMEN——	
	Cities	*High*	*Low*	*High*	*Low*
New England	Large*	$2.06	$1.53	$2.10	$1.65
	Medium	2.04	1.53	1.93	1.62
	Small	1.67	1.31	1.53	1.23
Mid Atlantic	Large	2.18	1.65	2.16	1.90
	Medium	2.12	1.67	2.06	1.72
	Small	1.93	1.66	2.11	1.81
Midwest	Large	2.53	2.19	2.19	1.98
	Medium	2.69	2.03	2.20	2.01
	Small	2.64	1.98	1.98	1.71
South Atlantic	All Cities	1.61	1.12	1.81	1.42
Pacific N. W.	All Cities	2.48	2.14	2.60	2.36
National Average	*All Cities*	2.21	1.81	2.11	1.82

*Large Cities—Over 250,000 population.
Medium—25,000 to 250,000 population.
Small—Under 25,000.

average department that takes care of these larger commercial and industrial jobs had 57 such accounts in 1953.

One of the more interesting findings in the study this year is shown in TABLE 3. It becomes more clear as the years pass that burner service is finding its home in the fueloil companies. Notice in the table that almost two-thirds of all service departments are in companies that also sell fueloil. More significant than that is the discovery that three-fourths of all oilheating users get their burner service by companies that sell fueloil.

The reasons for this trend are quite obvious. If service is going to be a break-even department the smaller dealers in equipment would like to stay away from it if they can. Each year we see more small dealers of the plumbing or furnace type coming into the industry. There are literally thousands of these dealers who would average six or eight oilheating installations a year. They can't afford the time to fully understand burner service.

The oil company on the other hand has to be sure that its customers have oilburners that operate with a minimum of trouble . . . otherwise the impression of oil as a fuel will suffer. Thus we see this trend of burner service to fueloil marketers being accelerated every year. The last item in TABLE 4 shows that 15% of the service departments will not handle any customers unless they are oil accounts of the company.

Service departments have done a nice job in providing leads from which the sales department can get some oilheating equipment business. TABLE 4 shows that throughout the country ten percent of all sales originated in the service department.

Another interesting trend among oilheating dealers is the increasing separation of service departments from the installation crews. TABLE 5 shows one evidence of this. In the United States there are approximately 36,808 installation and service men fully employed on oilheating work. Just under half of these or 17,018 are in companies that do not separate the two activities. The remaining men are divided almost equally between exclusive service work and exclusive installation work. A comparison with 1952 would indicate a very sharp change in the direction of specialization.

The figures may exaggerate this trend from one year to the next . . . perhaps we made the question a little more clear this year, but even so the 1953 column shows that more than half of our industry's skilled mechanics specialize.

This separation of service and installation crews carries over into wage rates. The installation men have pushed ahead faster during 1953 than the servicemen although they both made substantial gains. In the four columns of TABLE 7 you get the picture in detail. To understand this table we should explain that the high figure is not the highest reported by any one company. Each of the reporting companies gave us the rate of its highest and lowest man. Thus where we show the high figure in the table it is the average of all in the high bracket.

A year ago the national average for installation men was $1.95 high and $1.52 low. For servicemen it was $1.96 high and $1.57 low.

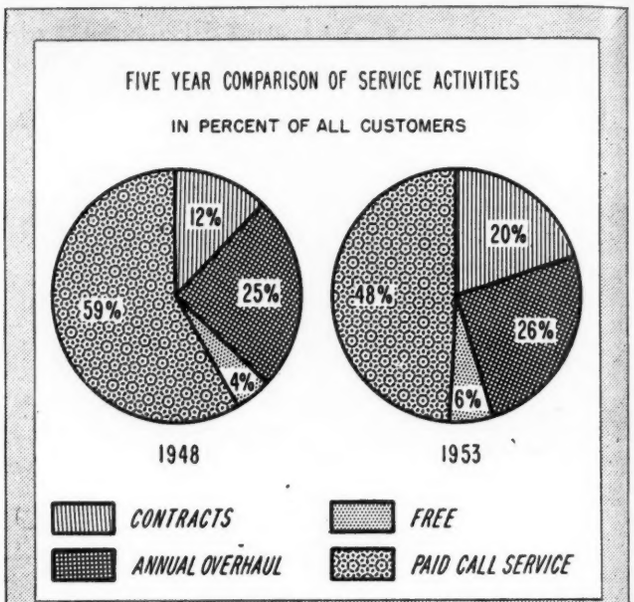
The very substantial rise in wage rates in a single year should go a long way toward improving the availability of manpower for this work.

Labor unions have come into the oilheating industry to the extent of 20% of all companies and this compares with 19% in 1952. On the average these are larger companies, as indicated by the fact that 29% of all installation and servicemen carry union cards. You will get these ratios by sections of the country in TABLE 8.

The trend to better wages for our good mechanics is further shown in TABLE 9. Here we see that the average man in 1953 earned $4,684. This compares with $4,212 in 1952, showing a rise of 11%. The average rise in hourly rates was a little greater than that, showing that the men did not put in as many hours in 1953 as in 1952.

Service contracts and annual overhauls are explored in TABLE 10. The Mid-Atlantic area has come a long way in the direction of including parts in its service contracts. With 35% of all service customers on annual contracts it is far ahead of any other group. The whole idea of service contracts has only made real headway in the Mid-Atlantic and New England regions, and of course in that general Northeastern section of the country we have our greatest oilheating concentration . . . 59% of the nation's total. The table shows comparisons between 1953 and 1948, or five years earlier, in the national picture. Contracts of all types have risen from 12% to 20%.

The other section of the table reflects annual overhauls or what we used to call "summer cleanups." In the five year period the number of these



has gone up 1% but the average price has gone up 50%. This is probably a good idea because it has long been one of the weak spots for service department losses. Adding the contracts and the annual overhauls we now have 46% of all customers getting proper preventive maintenance, compared with only 37% five years ago.

Next we show in TABLE 11 a five year comparison in the minimum charge for a service call when the customer is not under contract. For the country as a whole this average has gone up from $3.15 in 1948 to $3.89 in 1953.

Of course in the five year period the cost of everything has gone up some. For example the BLS Cost of Living Index went up 12%, but the minimum burner service charge went up 23%. There can be no complaint about this because it has been necessary to take steps to cut out the service department losses of some years ago.

The amount of free service after the end of the first year warranty period is also shown in TABLE 11 and this has gone up in five years from 4% of total service to 6%. It appears to be most prevalent in the medium and small cities of the Mid-Atlantic region.

There are some areas, like Buffalo for example, where folks consider they give free service, but

TABLE 10

More Service Contracts include Parts

	SERVICE CONTRACTS				ANNUAL OVERHAUL	
	Percent All Customers Including Parts	*Price With Parts*	*Percent All Customers Without Parts*	*Price Without Parts*	*Percent All Customers*	*Average Price*
New England	8%	$25	13%	$19	33%	$10
Mid-Atlantic	28	21	7	19	21	13
South Atlantic	2	20	..	15	49	9
Midwest	..	..	6	18	24	12
Pacific N. W.	..	..	7	16	22	13
All Sections 1953	13	22	7	18	26	12
All Sections 1948	4	21	8	17	25	8

TABLE 11

Minimum Charges are Up;

SO IS FREE SERVICE

	Minimum Charge Call	*Percent Free Service*
NEW ENGLAND		
Large Cities*	$4.60	1%
Medium Cities*	3.79	6
Small Cities*	3.61	6
MID-ATLANTIC		
Large Cities	4.19	3
Medium Cities	3.52	11
Small Cities	3.21	12
MIDWEST		
Large Cities	5.04	4
Medium Cities	4.33	2
Small Cities	2.79	9
SOUTH ATLANTIC		
All Cities	3.80	6
PACIFIC NORTHWEST		
All Cities	3.91	6
All Sections 1953	3.89	6
All Sections 1948	3.15	4

*Large cities over 250,000.
*Medium cities 25,000 to 250,000.
*Small cities under 25,000.

TABLE 12

Service to Farms

	Percent of Customers on Farms	*Distance From Town Without Extras (miles)*	*Charge per mile Beyond*
New England	4%	10	13¢
Mid-Atlantic	3	12	14
South Atlantic	3	15	10
Midwest	12	13	10
Pacific N. W.	4	15	10
All Sections	6	12	12

TABLE 13

Oilfired Boiler Heating

GAINS IN 1953 INSTALLATIONS

	Steam	*Hot Water*	*Forced Air*	*Gravity Air*
New Eng.	23%	36%	29%	12%
Mid Atl.	37	34	20	9
South Atl.	8	11	53	28
Midwest	13	16	58	13
Pac. N. W.	1	3	88	8
1953 Av.	23	25	40	12
1952 Av.	18	29	38	15
1951 Av.	23	26	36	15

where the margins on fueloil are enough higher than other markets in similar situations to show that what they really have is universal service included in the oil price. This has been quite effective in giving the consumer the best oilheating throughout the Buffalo region, also in the Cape Cod section of Massachusetts and a few other spots.

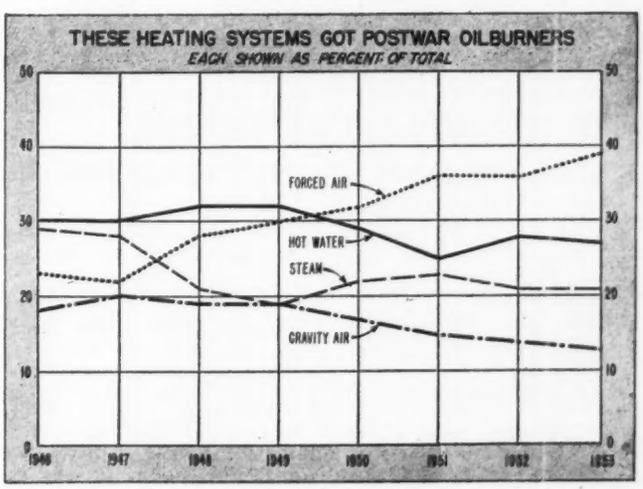
Farm service continues to be relatively inconsequential as shown in TABLE 12. This would indicate that only 6% of central heating oilburners are located on farms, while we know that 18% of our population lives on farms. This is an excellent potential market for more oilburner sales as we have repeatedly pointed out in the magazine and we still strongly feel that it is being neglected. Farmers do not often come seeking an oilburner to buy, but the few dealers who have specialized on farm work report that they are not too hard to sell when they are willing to put effort into the undertaking.

As to how to charge for service on the farms we find in TABLE 12 that the average dealer makes no extra levy if the farm is within 12 miles of his place of business. Beyond that he charges on the average 12¢ a mile both ways to cover the cost of both car and serviceman. As an example a customer 20 miles from home base would require 16 miles extra driving beyond the 12 mile limit. At 12¢ a mile this comes to $1.92 which would be added to the normal service charge for an account located within the normal working area.

Boiler heating in 1953 made a slight gain at the expense of warm air in the oilheating industry. Among all installations made during the year 48% went into boilers and 52% into furnaces. This ratio was more favorable to boilers than is found with any of the other automatic fuels. You will notice in TABLE 13 that there are strong sectional differences. The extremes are the Mid-Atlantic states where boilers have 71% and the Pacific Northwest where warm air has 96%. The trends through the years since the end of World War II are shown in an accompanying chart. There was a rather pronounced trend away from boiler heating in the early part of that period, but the competitive situation now seems to about reach equilibrium.

One point should be made clear in connection with this table. We are not saying that 48% of the installations went into new boilers and 52% into new furnaces, rather these figures show the type of heating employed in the building where oilheating was installed, be it a new boiler or furnace or simply a conversion oilburner going into the existing boiler or furnace.

The situation disclosed in TABLE 14 highlights a serious problem in our industry. Only 37% of the oilheating installations in 1953 carried along an oilfired facility for providing domestic hot water. Where the oilheating was a boiler job we had the best opportunity with oil fuels. Notice in the first column that 33% of all installations had a summer-winter hookup on the boiler. Then since we saw in TABLE 13 that 48% of the total were boiler jobs this means that a little more than two-thirds of the boiler jobs got this year-round water heating. The amount of oilfired water heating in separate units, either vaporizing or power burner, was lamentably small. Gas and electricity combined took 56% of our water heating business.



The oilheating industry badly needs a good separate water heater to be installed with warm air heating that can be sold at a price not far above gas or electric units. This heater should definitely burn No. 2 oil so that it can come out of the same tank as the central heating plant. This is a promising field for development and the manufacturer who achieves this will undoubtedly get some fine business.

The last column in TABLE 14 listed as "other methods" includes, of course, miscellaneous fuels, but the principal implication here is that the home is heated with an old style furnace with a water heating coil in the combustion space, so that the water supply is heated by the oilburner in the winter only. For summer hot water another fuel is used, normally either a gas side-arm tank heater, or an anthracite monkey stove.

The number of oilheating dealers who operate their own sheet metal shops now stands at 28% of the total. This is shown by sections in TABLE 15. Using prefabricated ducts are 39% and those who subcontract or farm out their sheet metal work are 46%. Quite a number of dealers use more than one of these methods so the percentages total more than 100. The most interesting part of this table is the fourth column which shows that 12% of all dealers in the reporting group plan to have their own sheet metal shops either in 1954 or 1955. All of this, of course, reflects the fact that warm air equipment has been making headway in the East.

Service departments naturally provide an important outlet for oilheating parts and accessories as shown in TABLE 16. Manufacturers generally have criticized similar tables in previous years, feeling that the quantities shown are too low. One thing to keep in mind is that these have nothing to do with original equipment on a new installation.

To some extent these figures reflect the inadequacy of certain service responsibilities. If air filters were changed once a year quite a lot more than a million would be bought through oilheating channels. Dealers generally, however, are well aware that their men do not make these changes often enough and in a number of instances they simply remove the filters and leave them out to increase the capacity of the heating unit. This is a situation that requires substantially more education by the filter manufacturers. Possibly it requires a higher profit margin to the dealer, to interest him in making special trips just to replace filters. The same comment in a lesser degree would apply to oil filters, and certainly to combustion chambers.

The industry could stimulate the sale of quite a lot more of these parts and accessories but it would only be justified in doing this to the extent that it would make oilheating more effective.

The year just ended, as we have seen in several sections of this report, has been a good one both for customers getting better service and for dealers getting paid for it. A part of the stimulus in this direction naturally comes from the pressure of gas competition and the recognition that oilheating must be made near perfect. The outlook is for a continuation of this trend for 1954.

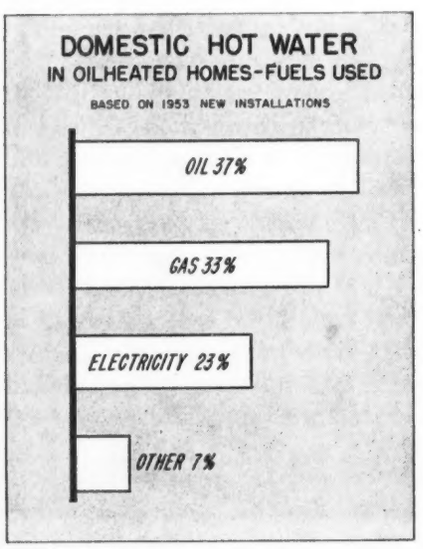


TABLE 15

More Sheet Metal Shops

	Own Shop	*Use Prefab*	*Farm Out*	*Plan Own Shop*
New Eng.	15%	51%	54%	27%
Mid Atl.	11	38	57	5
South Atl.	27	55	55	18
Midwest	45	34	32	11
Pac. N. W.	60	30	20	10
All Sec.	28	39	46	12

Note: Percentages total more than 100 since some dealers use two methods.

TABLE 14

Too much Water Heating by other Fuels*

	Summer-Winter Hookup on Boiler	—SEPARATE BURNER— *Vaporizing*	*Power*	—OTHER FUEL— *Gas*	*Elect.*	*Other Methods*
New England	42%	4%	3%	17%	19%	15%
Mid Atlantic	55	1	2	28	6	8
South Atlantic	13	3	..	14	69	1
Midwest	5	3	1	63	24	4
Pacific N. W.	5	..	1	20	76	..
All Sections	33	2	2	33	23	7

*The percentages shown in the table disclose how domestic water was heated in homes getting new oilheating installations in 1953 . . . they do not refer to total oilheating jobs in use.

TABLE 16

Parts and Accessories

APPLIED TO OLD BURNERS IN 1953

NEW EQUIPMENT	
Motors	54,886
Transformers	65,678
Burner pumps	66,565
Circulators	20,808
Low water controls	38,143
Burner controls	147,840
Adj. vent valves	150,353
Draft controls	99,053
Nozzles	747,220
Comb. chambers	152,497
Air filters	1,089,359
Oil filters	543,829
Oil tanks	143,478
RECONDITIONED EQUIPMENT	
Motors	158,004
Transformers	22,324
Burner pumps	149,762
Circulators	13,638
Low water controls	13,158
Burner controls	218,286

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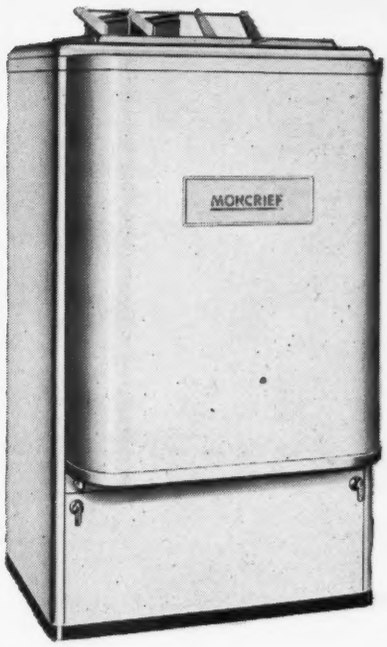

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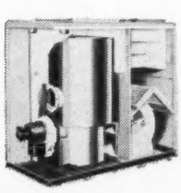
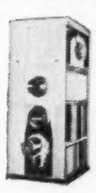
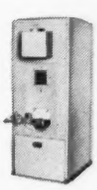


Basement A.C. Units

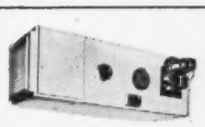


Counterflow Units

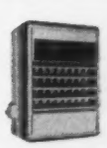


Utility Units

Gravity Furnaces



Horizontal Furnaces Gas Fired—Oil Fired



Gas Unit Heaters 4 Sizes

COMMERCIAL & INDUSTRIAL oilburning

School Building oilheated by ultra-modern System

Kalamazoo Junior High School has positive Ventilation combined with radiant Heating

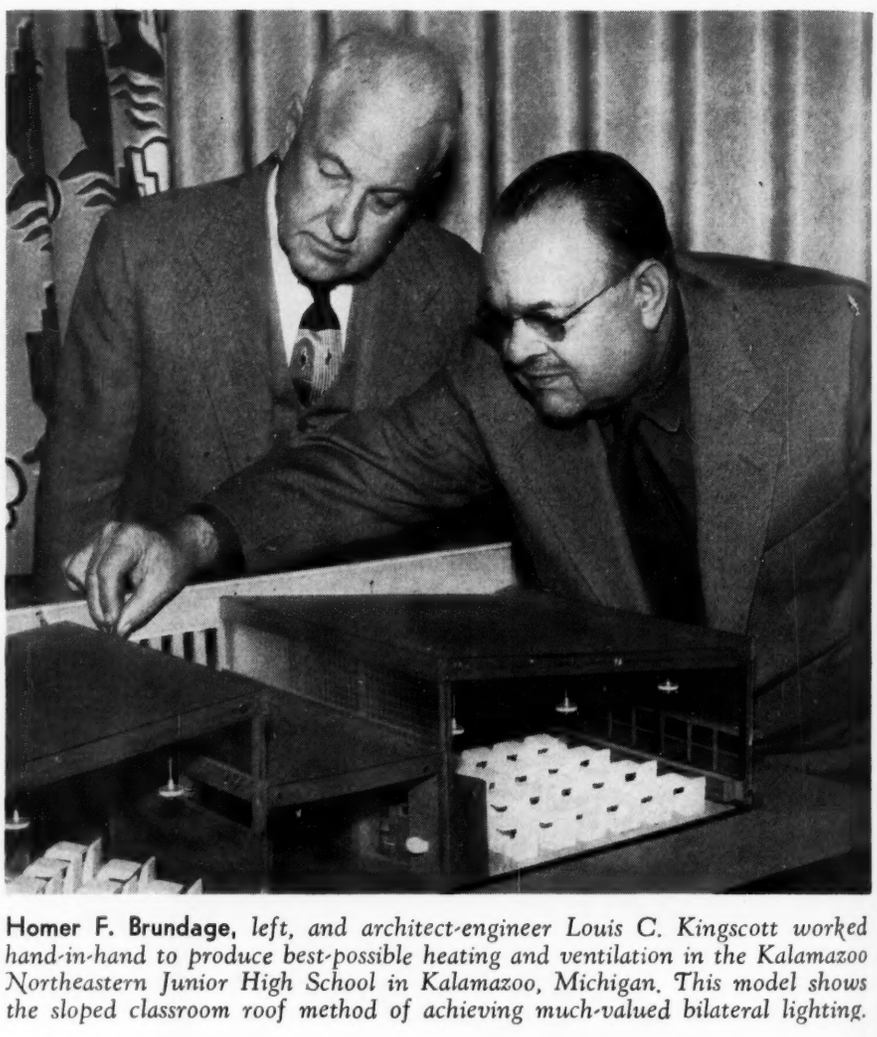
by
Jean L. Dupuis

A MAN came up with some new ideas. As the result, a new school is heated entirely differently than any school we've ever heard of. To contribute to the proper heating of every room, included in the school's equipment are oilfired boilers of the steam type, forced hot-water specialties in what amounts to a hot-water heating system or heat-transfer system, and finally warm-air ducts and blowers.

Homer F. Brundage is the man who came up with the new ideas. The school is the just-completed Northeastern Junior High School in Kalamazoo, Mich.

Slab-type floors were established as the basis of construction, early in the planning of the school. There'd be no basement or air space under the floors of the classrooms. Radiant-in-floor heating naturally is considered for such construction. It's used widely today. Put into the floors the Btu's needed for heating, and you wind up with warm floors and warm rooms.

There are many advantages to this. Concentrating on the planning of the new school—he is President of the



Homer F. Brundage, *left, and architect-engineer Louis C. Kingscott worked hand-in-hand to produce best-possible heating and ventilation in the Kalamazoo Northeastern Junior High School in Kalamazoo, Michigan. This model shows the sloped classroom roof method of achieving much-valued bilateral lighting.*

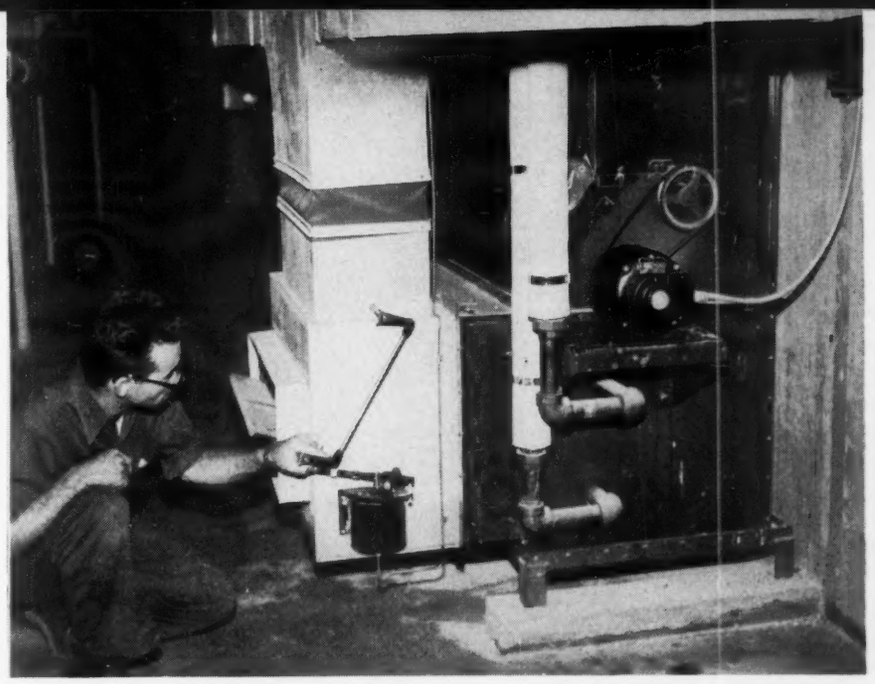
Kalamazoo *Northeastern Junior High School, excellently ventilated by unique system, serves 450 students in grades seven, eight, and nine. Includes 19 classrooms, library, cafeteria, gymnasium, and special health rooms. The 200-horsepower boiler room has spare capacity for later increases in size of school. Appearance of school is not marred by presence of tall chimney, thanks to the fact that the York-Shipley package boilers that heat the school need no chimney.*

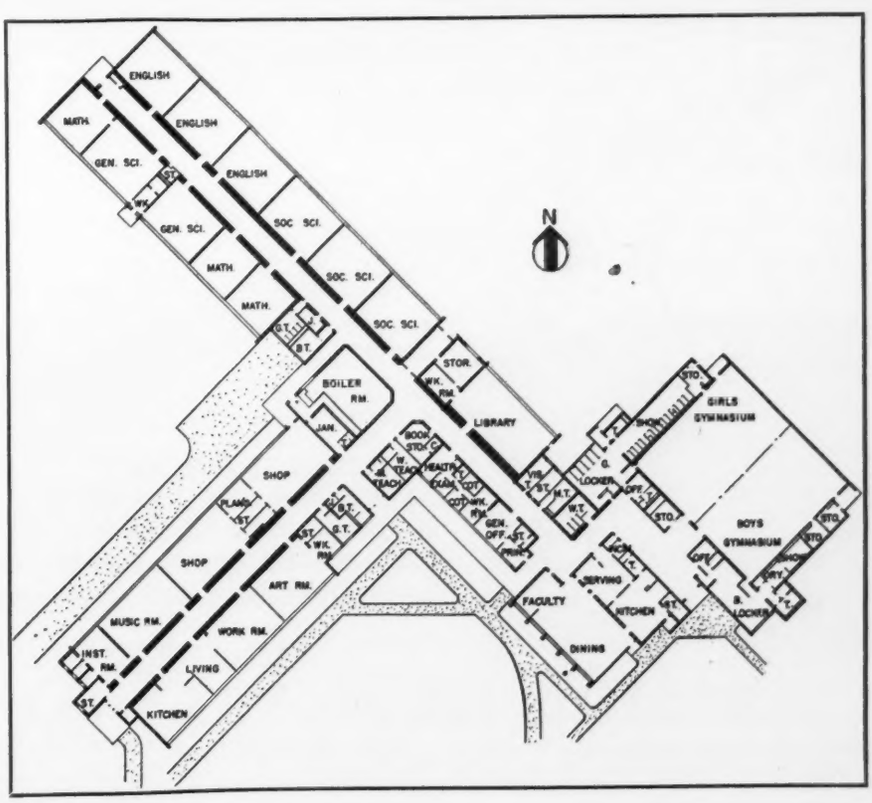
Board of Education in Kalamazoo—Homer Brundage developed the idea that to the advantages of radiant-in-floor heating could be added the advantages of controlled ventilation. His emphasis on proper ventilation, using positively controlled amounts of fresh air from outdoors, can be well understood. Blowers and ventilation are his lifetime work. His Brundage Company, Kalamazoo, has specialized in blowers since 1919.

Homer Brundage presented the radiant heating-ventilating system ideas, which he had developed, to the Kalamazoo Board of Education and the architect planning the new school. The result was the use of his unique, ultra-modern system in the school.

Fig. 1 shows the basic plan for heating a classroom in this school. Warm air flows continuously through passages in the floor, when a classroom is in use, and finally enters the classroom through supply registers located under the windows, on the cold-wall side of the room. Each classroom is served by a remote unit, shown in Fig. 1, which includes a centrifugal blower, hot-water type air-heating coils, and air filters. This unit is located in a tunnel under a corridor (see Fig. 2). Individual temperature control for each room is a feature, naturally.

Here's the big point: The tunnel in which the heating and ventilating unit





Ventilating *and heating unit—20 units like this (above right) are in tunnel that's kept full of fresh air by action of big blowers drawing in outside air from intakes above roof of school. Man is working on air dampers, operated automatically by pneumatic motor. When open, top damper permits air to flow to blower from return-air registers in classroom. Other damper, when open, admits tunnel air (fresh, filtered, and preheated). Design basis gives blower a minimum of 20% outside air.*

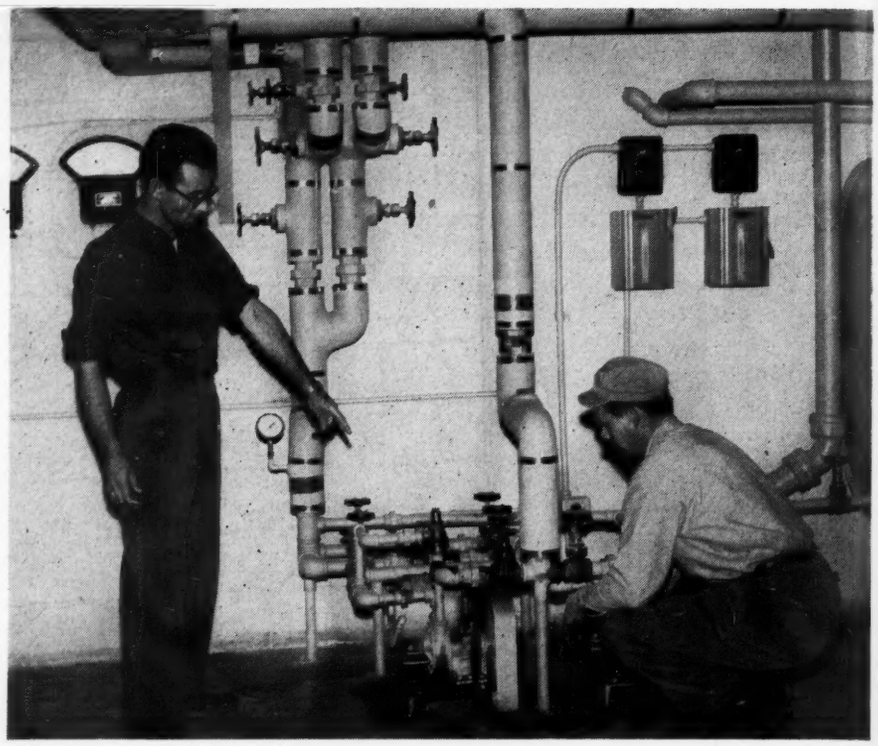
Gymnasium—*(middle right) modern features, aside from the indoor-air or outside-air heating equipment described in article, include an automatic electrically-operated folding partition that permits boys' and girls' gym classes to be held simultaneously.*

Bottom right—*Floor plan of Kalamazoo Junior High School.*

is located is kept full of fresh air from outdoors, drawn in from air-intakes above the roof by fresh-air blowers and preheated to a suitable temperature—and the heating and ventilating unit that serves each room can draw in 100% outside air or any desired percentage of outside air together with re-circulated air from the classroom. The air the unit draws in to its blower is, of course, the air that in a few seconds finds its way to the classroom.

The system achieves this main objective: Each room is properly ventilated. Fresh air, in needed amounts, is forced positively into each room by the blower that serves the room.

Each room is properly heated by (a) Btu's from the air flowing continuously into the room through the warm-air supply registers located under the windows, and (b) Btu's from the floor, which is warmed by the warm air flow-



Pump sets *that forward No. 6 fueloil to boilers, and circulate hot fueloil. At extreme right appears a bit of the 275-gallon tank containing light fueloil that can be used, if operator finds this most convenient, to start up a stone-cold boiler. At left are two tank gages for outside tanks containing No. 6 fueloil.*

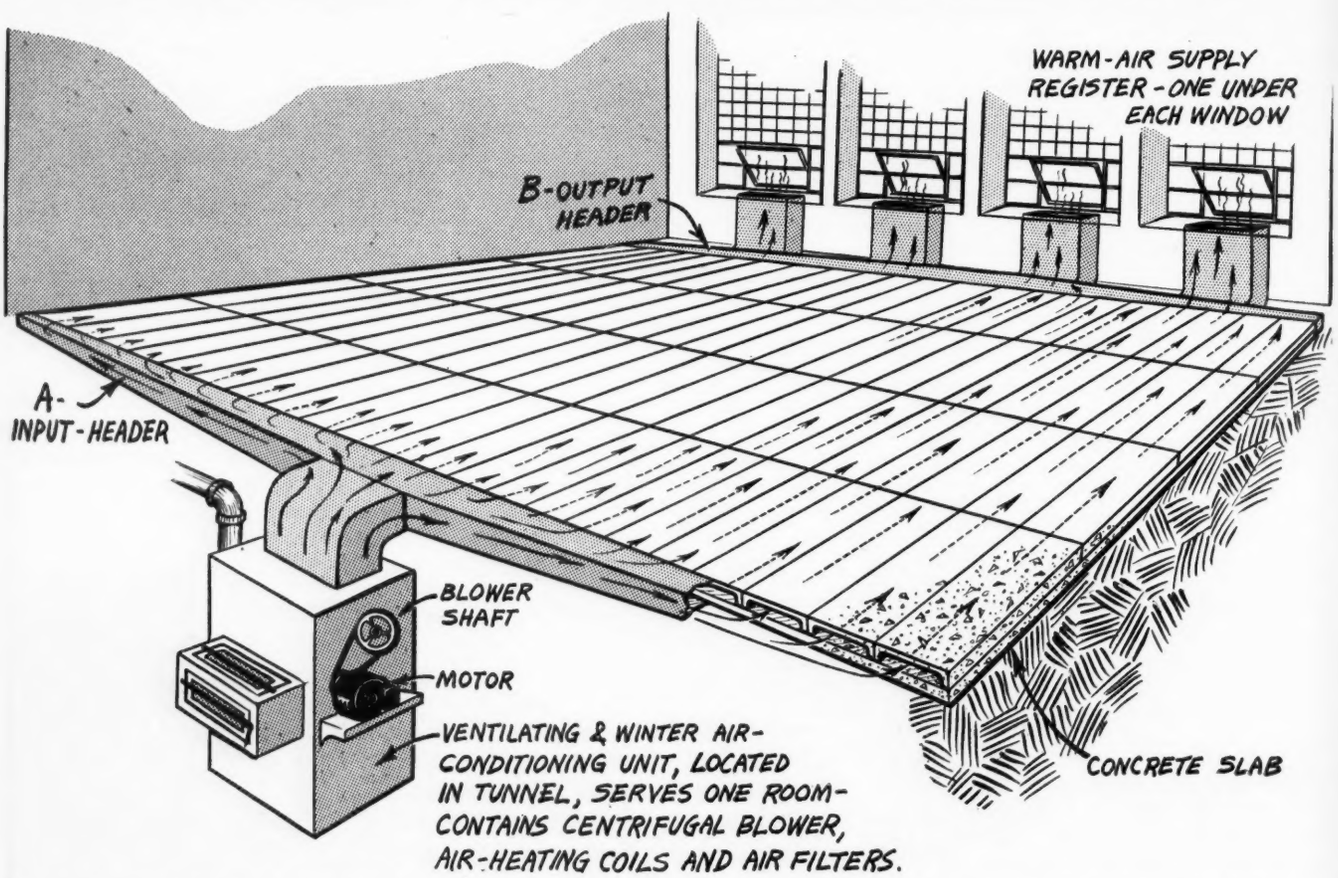
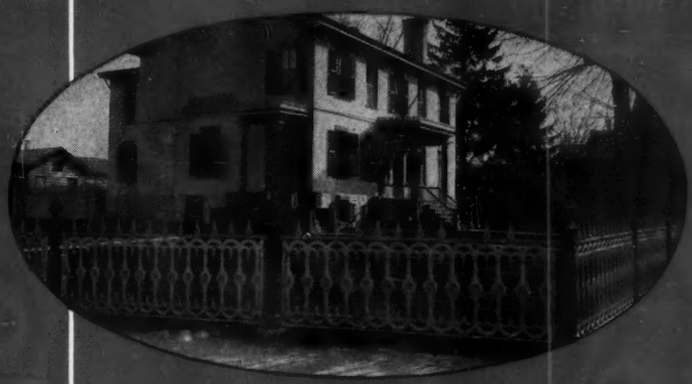

WARM-AIR SUPPLY REGISTER - ONE UNDER EACH WINDOW
B-OUTPUT HEADER
A-INPUT-HEADER
BLOWER SHAFT
MOTOR
VENTILATING & WINTER AIR-CONDITIONING UNIT, LOCATED IN TUNNEL, SERVES ONE ROOM-CONTAINS CENTRIFUGAL BLOWER, AIR-HEATING COILS AND AIR FILTERS.
CONCRETE SLAB

Fig. 1—*Roof tiles, placed end-to-end to provide straight-through air passages, gives this classroom its floor heat. Additional warm-air heat results from the continuous flow of warm air from the four supply registers beneath the windows. Shown open here for clarity, actually the four windows are kept tight-closed in winter! The blower in the heating and ventilating unit puts pressure on "A," the input header, causes air to pass under the entire floor. "B" is an output header or gathering header. Into it pours the air that has passed under the floor. Out of it passes the same air, on way to four supply registers at the windows.*

What's this about a Bank Fence and a Boiler?



Union Bank of Kinderhook, H. B. Smith fence — 1859

National Union Bank of Kinderhook, same fence — 1954

A true story — with a moral for the boiler specifier

Now flourishing as the National Union Bank, the Union Bank of Kinderhook, N. Y., was founded in 1853, the year in which the H. B. Smith Company was established.

Six years later, H. B. Smith journeyed from Westfield to Kinderhook to lay before the Bank Directors a proposal: to furnish an elegant new cast iron fence to enclose the grounds of the banking building. Good salesman as always, H. B. came back with the order and the fence was speedily erected.

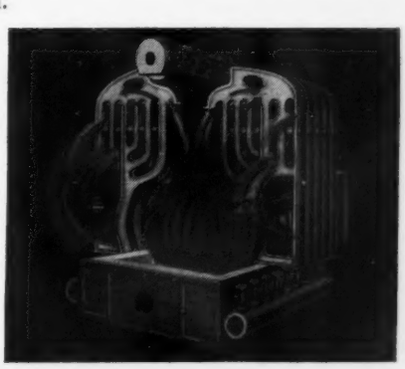
Today, visitors to Kinderhook are still impressed with the decorative appearance of this fence. Ninety-four years of constant exposure to all kinds of weather have done little to wear the sturdy gray iron castings from H. B. Smith's foundry.

Does this tale hold a moral for the boiler specifier? We think it does!

As used in H. B. Smith boilers, cast iron is an enduring material, highly resistant to corrosive acidic gases, and virtually indestructible except through human neglect or positive mistreatment. It has the qualities of controlled chemical uniformity, adaptability to intricate coring, and rapid and thorough heat absorption.

It is not unusual to find H. B. Smith boilers which have given uninterrupted service for 50 or 60 years and to which sections have been added as the need for greater heating loads has arisen. Thousands have been converted and reconverted to the use of various fuels as economy or supply made one or another more advisable. We know of one installation which has been in continuous use since 1884 — 70 years of service — with the only maintenance cost the replacement of grate bars, doors or other minor trim items.

Your customers are looking to you to provide a boiler with these qualities; you can recommend nothing better than an H. B. Smith.



Note how more boiler heating surface and longer flue travel exact full benefit from fuel. Tall chimneys and induced draft mechanisms are not necessary with efficient Smith-Mills boilers.

World's Broadest Line of Cast Iron Boilers for Heating and Domestic Hot Water

H.B. Smith CAST IRON BOILERS

THE H. B. SMITH COMPANY, INC., WESTFIELD, MASSACHUSETTS

Established 1853

fueloil & oilheat

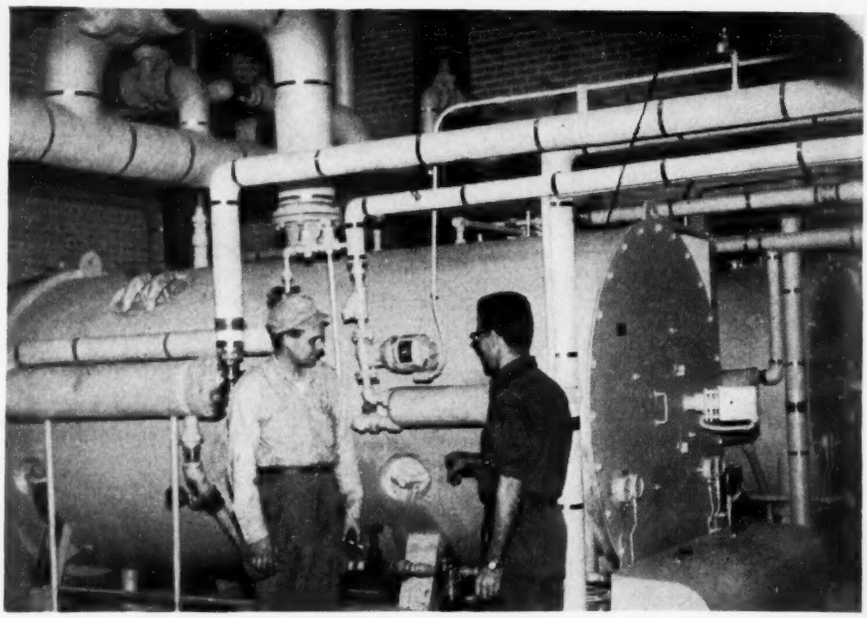
ing through the passages in it. Proper temperature in each room is insured by the room thermostat located in the room, which controls the rate at which hot water flows through the air-heating coils. On its way to the room, the air passes through these coils.

Dozens of niceties and variations are involved in the usual performance of this radiant heating-ventilating system, and in the unusual performance it can be set up to provide. Unusual performance is, in fact, a big feature; utterly flexible, the system can give all the classrooms heating and ventilation of one pattern, or it can heat and ventilate any classroom differently than the others. During cold weather, the fresh air drawn by blowers down the fresh-air ducts, from the air-intakes above the roof, can be heated to any desired temperature between 40°F. and 60°F. Steam coils controlled by thermostats heat this air. Fresh-air filters remove dirt from it. The fresh-air blowers maintain a slight positive air pressure in the tunnel under the corridor (see Fig. 2) in which are located the 19 heating and ventilating units that serve the 19 classrooms of the school, and one additional unit that serves the school's cafeteria.

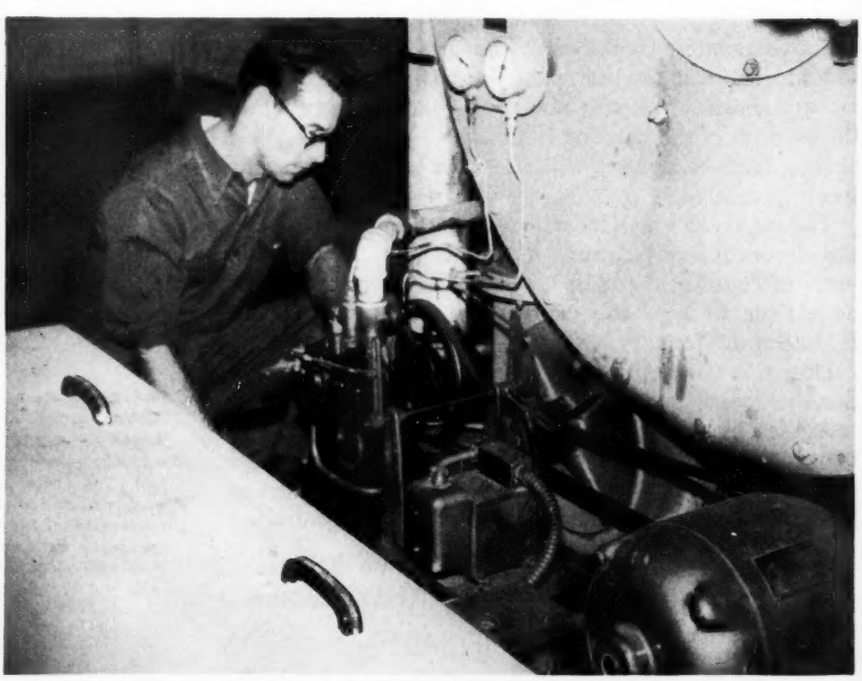
During mildly cold weather, with outside temperatures between about 40°F. and 55°F., classrooms that do not get the benefit of much heat from the sun need heat from the heating-ventilating system to keep them at 72°. At the same time, other classrooms sometimes receive such great amounts of heat from the sun as to actually tend to overheat them. Under these conditions, the heating-ventilating system does a job of cooling the rooms that tend to overheat, for it can send into these rooms unheated outside air from the tunnel in which the heating and ventilating units are located. On some days, then, some of the classrooms are being heated while others are being cooled—by the heating-ventilating system that at all times ventilates each classroom properly.

The proper metering of fresh air to each classroom, while it's occupied, tends to put plus pressure on the room. This avoids drafts from inevitable air leaks around windows that can open, for warm air flows out through any air leaks—cold air from outside cannot enter through the air leaks.

There's no interchange of air between classrooms with each room receiving the proper amount of fresh air from the tunnel. Experts at hygiene put great value in that feature; air that's been breathed out by the occupants of one room is not passed on to the occupants of another room—it is exhausted by virtue of the continuous pouring of fresh air into the building by the fresh-air blowers that feed the tunnel its fresh air. Stale air must leave



York-Shipley *Steam-Pak Generators, 100 hp each, provide the steam for this combination steam-type, hot-water type, warm-air type system. Oilburners are unusual type—use No. 6 fueloil, fired by nozzles having compressed air supply lines, heated-oil lines. Notice electronic flame-monitoring control on boiler front.*



Oilburner mechanism *at front of boiler, cover removed. Motor at right drives compressor that provides atomizing air for nozzle, fueloil metering pump of positive-displacement type, and forced-air blower that provides 100% of the air needed for combustion. Separate pump set is used also and is not shown here.*

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Send for these FREE "Modernization Check Lists". Have your servicemen uncover replacement sales in your commercial-industrial installations.

Join the large group of distributors who will show a handsome profit during the normally slack season. You can do it with this FIREYE plan.

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The plan is practical and profitable. Your servicemen make modernization surveys of all commercial-industrial oil burner units more than two or three years old. You know how many of these are *incomplete* by today's standards. Changes in insurance codes, as well as equipment and control standards have left some of your burner customers far behind. At least $1000 in potential business is there for your man to uncover *on each call* — in replacing obsolete or run-down equipment to give your customers the ultimate in efficiency and protection.

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Rush me a sample "Modernization Check List" and instructions for its use.

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through the building's air leaks.

Although the main objective of this heating-ventilating system is to provide proper ventilation and heat to the n'th degree, economy of operation receives proper consideration in this school building. When the classrooms are not occupied, nights, and days when there's no school, the blowers of the 20 heating and ventilating units are operated intermittently. The hot-water

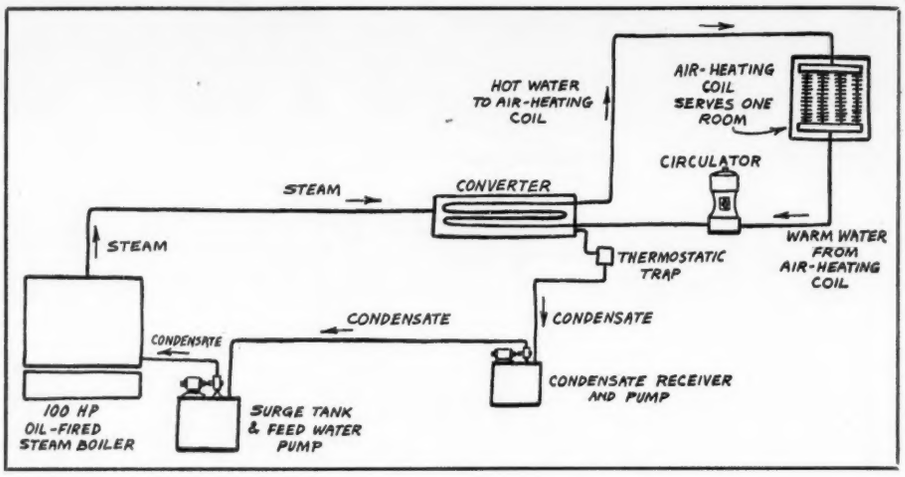

Fig. 3—*System necessarily combines features of steam heating plants, hot-water heating plants, and warm-air heating plants—all necessary to obtain the desired results. Use of steam in air-heating coils through which outside-air flows eliminates possibility of freezing, which would result from hot-water heating coil use.*

type air-heating coils are heated fully, not throttled, and the blowers run only enough to heat the rooms to the desired low temperatures. The outside-air blowers are turned off at such times. There's no forced ventilation, no forced flow of outside air into the building. The blowers of the heating and ventilating units work 100% at re-circulating room air.

Fig. 3 gives an idea of the pattern of the entire heating plant in this school. Actually there are two low-pressure steam boilers—each is a 100 hp York-Shipley Steam-Pak Generator using No. 6 fueloil. In Fig. 3, low-pressure steam flows from the boiler to the converter, which is filled with steam that heats water in the tubes within it. Equipped with a thermostatic trap that rids it of air and condensate, the converter discharges its condensate into the nearby condensate receiver. The pump on the receiver, started and stopped automatically by a float switch, passes the condensate back to a surge tank—also equipped with an automatic pump—located in the boiler room. This automatic pump, in effect a boiler feed-water pump, develops the pressure necessary to flow the condensate into the boiler.

The circulator, hot-water tubes of the converter, and air-heating coils, all in Fig. 2, are all parts of a modern closed hot-water heating system having

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No need for cumbersome, time consuming stick measurement. Here's the convenient—and accurate—way to read tank contents. The PETROMETER gauge can be installed on tanks above or below the ground, and at any distance away—up to ¼ of a mile. Set it where you want it.

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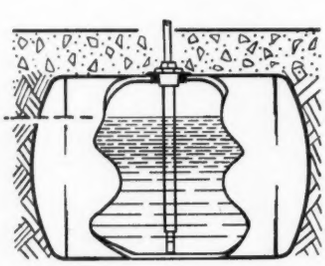

FOR TANKS 20 INCHES TO 50 FEET DEEP.

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2

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usual specialties (automatic feed and relief valves, closed expansion tank, etc.) not shown in the drawing. Operating continuously, the circulator speeds the water through the circuit, transferring heat from the converter to the air-heating coil.

Fig. 3 is greatly simplified, compared to the equipment actually used to heat the school. Actually the boilers provide low-pressure steam for three converters of the type shown in Fig. 3, for the steam-type air heaters through which fresh air entering the building passes on its way to the tunnel, and for steam-type air-heating coils that heat the gymnasium. Actually there are three closed-type hot-water expansion tanks, one at each converter. Centrifugal blowers work in conjunction

Return-air register *in classroom. Miller-Davis engineer reads velocity of air entering it. Flexible throughout, the system can be tuned for widely different cfm readings; blowers flowing air to rooms can receive 100% outside air in spring and fall on days when no heat is needed, or 100% inside air, recirculated. Blowers run continuously when rooms are occupied, intermittently when rooms are unoccupied.*

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4. PRECISION AIR-OIL CONTROL
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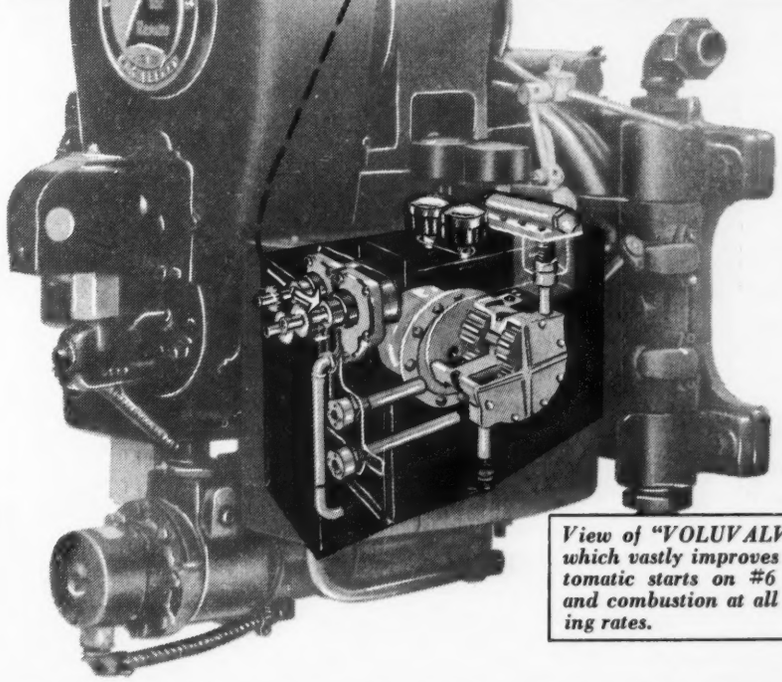

View of "VOLUVALVE" which vastly improves automatic starts on #6 oil and combustion at all firing rates.

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The VOLUVALVE receives a constant volume of heavy fuel oil from the discharge pump, meters the right quantity of oil, regardless of temperature, pressure and viscosity changes, and delivers it at all times in the exact volume required by the fuel atomizer.

The VOLUVALVE, plus the other built-in features (listed above) has put Preferred Horizontal Rotary Heavy-Oil Burners in a truly preferred class for fully automatic operation, uniform, efficient combustion throughout the entire high-low range of burner control and long service life. That is why Preferred is the leader today among commercial oil burners.

Preferred Oil Burners are available in sizes from 12 to 175 G.P.H. and 45 to 525 B.H.P. They are also made in combination oil-gas burner types, with quick change from one fuel to the other.

Install Preferred and be sure of performance that leads to wider demand for this truly fine commercial oil burner.

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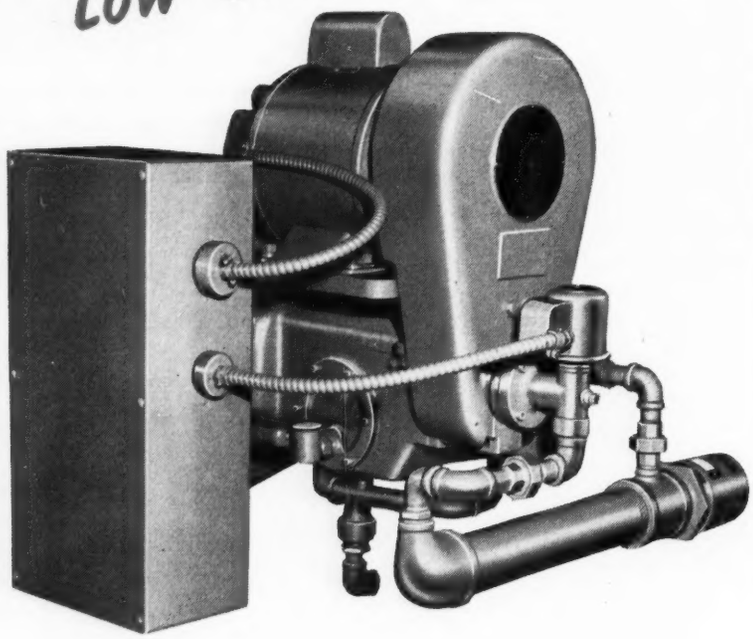

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TIMES TOWER, TIMES SQUARE, NEW YORK 36, N.Y.

SUPERIOR ROTARY BURNERS

with the steam-type air-heating coils that heat the gymnasium; these blowers can draw in 100% outside air, 100% re-circulated room air, or any desired mixture of outside air and room air. The coils are of a capacity that will heat the gymnasium during coldest weather with the blowers obtaining a maximum of 50% outside air—the remaining 50% would be re-circulated air from the room.

Direct radiation is used at the entrances to the school. Radiant panels and floor-heat arrangements are used in the toilet rooms and shower rooms.

The boilers that provide the power for this ultra-modern heating and ventilating system naturally receive much attention from the oilheating specialists who visit this outstanding junior high school. These York-Shipley, 100 hp Steam-Pak Generators use No. 6 fueloil, are fired by burners which are especially interesting, and with which many commercial-industrial burner experts are not familiar. York-Shipley calls them "automatic low-pressure air, atomizing-type burners with low-fire starting." Their flames can be modulated over a wide range in response to

Miller-Davis *(installer of ventilating and heating system) expert checks end product of the equipment. It all comes out here—the filtered, clean, warm air, including the all-important outside air that's needed for good ventilation!*

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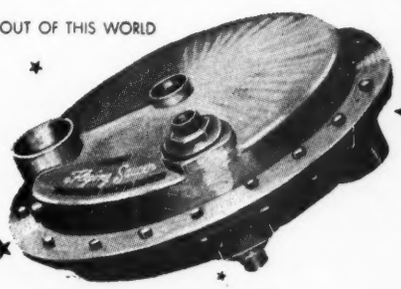

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A NEW TANKLESS **WATER HEATER**
HOT, HOT WATER

FOR SMALL HOMES AND RESIDENCES WITH 1 to 6 BATHS
having automatic dishwashers, washing machines, etc.
FOR SMALL APARTMENT HOUSES, 2 to 6 FAMILIES

MADE IN TWO SIZES FOR FAST-FLOWING, ABUNDANT, HEAVENLY HOT WATER

SPECIFICATIONS	GALLONS PER MINUTE	Flying Saucer TANKLESS HEATER
1, 2, 3 BATHROOMS (1 and 2 Family Houses)	4½ GPM	NFS-45
4, 5, 6 BATHROOMS (2, 4 and 6 Family Houses)	6½ GPM	NFS-65

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10 NEW FEATURES

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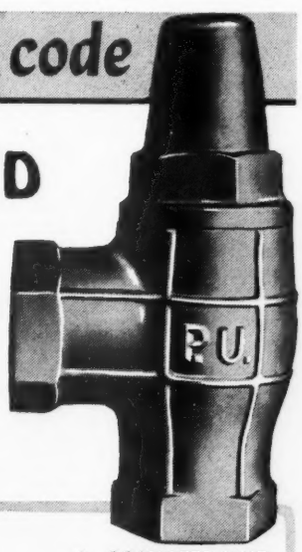

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Angle Type

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UNDER RE-EXAMINATION SERVICE OF UNDERWRITERS' LABORATORIES, INC. FOR OIL, GAS, STOKER OR COMBINATION FIRING

Here is what this means to you— When you specify, install or use CLEVELAND (patented) Sequence Draft Control Systems, you can now have the assurance that both the control and operating units have been tested and listed by Underwriters' Laboratories, Inc., for the following:

SAFETY—Interlocks with combustion safety controls for safe, dependable operation of control system with the resulting safety of boiler operation.

DESIGN—Correct mechanical and electrical engineering, with proper materials and construction.

ACCURACY OF PERFORMANCE—Sensitivity of instruments to variations in overfire draft and correct electrical and mechanical linkage to provide accurate automatic control within strict tolerance limits.

DEPENDABILITY OF OPERATION—Proven by extreme tests to provide adequate safety factors for all conditions.

ENDURANCE—Separate components passed rigid endurance tests. Complete system performs accurately after 100,000 operations.

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Draft Control and
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Only CLEVELAND DAMPER CONTROL has the ADJUSTABLE START FEATURE for induced draft systems

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steam load on the boilers; modulation is from 25% to 100% of boiler rating.

Parts of the burner include a rotary air compressor which provides atomizing air for the burner nozzle at about nine to twelve pounds pressure, a positive-displacement fueloil metering pump—gph output of which is constantly variable and is modulated by movement of a lever, an iris shutter for precise control of the air fed to the flame, and a forced-draft blower that provides all the air needed for combustion. No chimney draft or chimney is needed for this boiler—it uses a simple flue vent with no damper or draft regulator.

The package oil-boilers for this installation were provided by Stellingworth & Feely, agents for York-Shipley, located in Grand Rapids, Mich.

In the materialization of his dream-come-true heating and ventilating system for the Kalamazoo Northeastern Junior High School, Homer F. Brundage received unbounded assistance from architect-and-engineer Louis C. Kingscott, and from the company that actually installed the equipment, the Miller-Davis Plumbing & Heating Company.

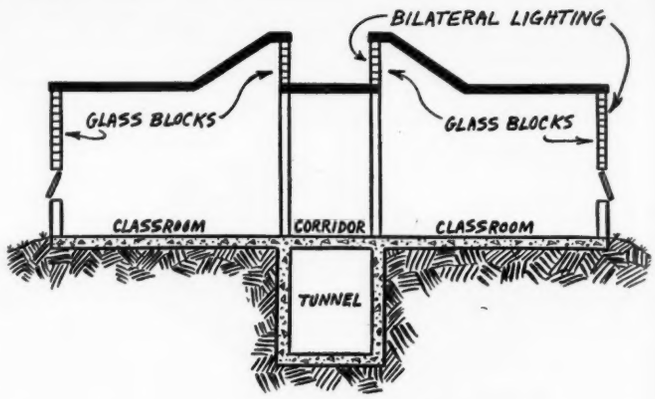


Fig. 2—*Tunnel below the corridor. Into it pours properly filtered and preheated outside air, forced in from above-the-roof air intakes by big blowers. Located in the tunnel are the 20 heating and ventilating units that serve 19 classrooms and a cafeteria. Bilateral lighting, shown here, is one of the school's modern features.*

❖

Q. Do you know an old thumb rule about how much draft should be provided for every ten feet of chimney height?

D. R. O., Centerville, Ia.

A. This may be it: Under favorable conditions, you can expect every 20 ft. of stack height to provide 1/10 inch water of draft. Boiler capacity compared to stack dimensions must be right. CO_2 should not be lower than about 8%. Stack temperature must not be lower than about 450° F.

❖

L. L. Edwards has been appointed general manager of the direct representative and distributor organization, A. P. Green Fire Brick Co. of Texas. The parent company, A. P. Green Fire Brick Co., Mexico, Mo., has named Ed C. Miller district sales manager of its Indianapolis office.

• SINCE 1926 • in the application, design and mfg. of pumps — separators — hydraulic accessories

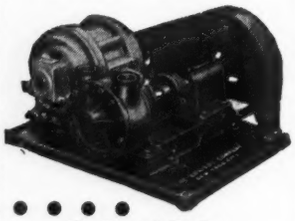
PUMPS and SEPARATORS for oil burner service

CLASS 50 LIGHT OIL PUMPS

Direct Drive for #1 to #5 oils inclusive
Ask for bulletin A-1330

Reduction Drive for heavy oil
Ask for Bulletin No. A-1193

CLASS 60 HEAVY OIL PUMPS



Single and Duplex
Standard and High Pressure Baskets instantly and easily changed — eliminates filter replacement costs entirely.
Ask for Bulletin No. A-1214

CLASS 72 STRAINERS —FILTERS

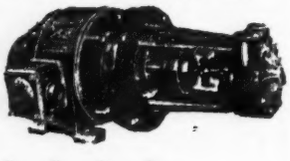
Single

Duplex

for bulk station service

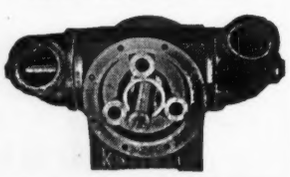
CLASS 60M MOTORED PUMPS

Direct Drive
For exclusive use with Light oils and Solvents
Ask for Bulletin No. A-1267



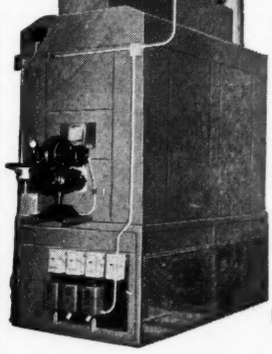
Interchangeable Service
Both light and heavy oils—tank truck and bulk station
Ask for Bulletin No. A-1366

CLASS 80 TRI-ROL PUMPS



KRAISSL CO. Inc.
295 WILLIAMS AVE., HACKENSACK, N. J.

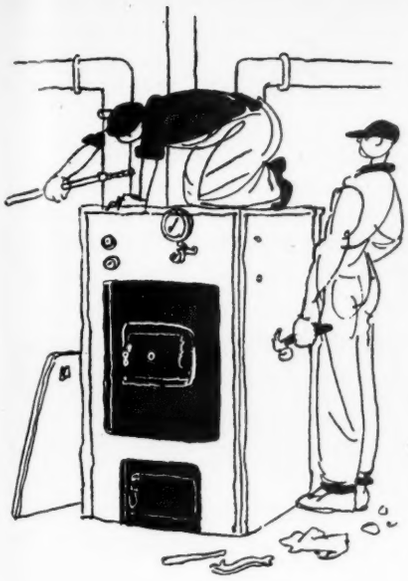
ARTCRAFT
Direct Fired
SPACE HEATERS
THE MOST MODERN, ECONOMICAL AND FLEXIBLE METHOD OF HEATING LARGE AREAS



SERIES "A" FOR
• INDUSTRIAL BUILDINGS
• BARRACKS
• REPAIR SHOPS
• HANGARS
• WAREHOUSES
• SCHOOLS
• RECREATION HALLS, CHURCHES, ETC.

FIRED WITH GAS OR OIL

Capacities: 200,000-2,000,000 B.T.U.
(Also Suspended Furnaces, 75,000-750,000 B.T.U.)
Manufactured by
Chicago Steel Furnace Co.
9326 S. ANTHONY AVENUE
CHICAGO 17, ILL.



Everyday Snags

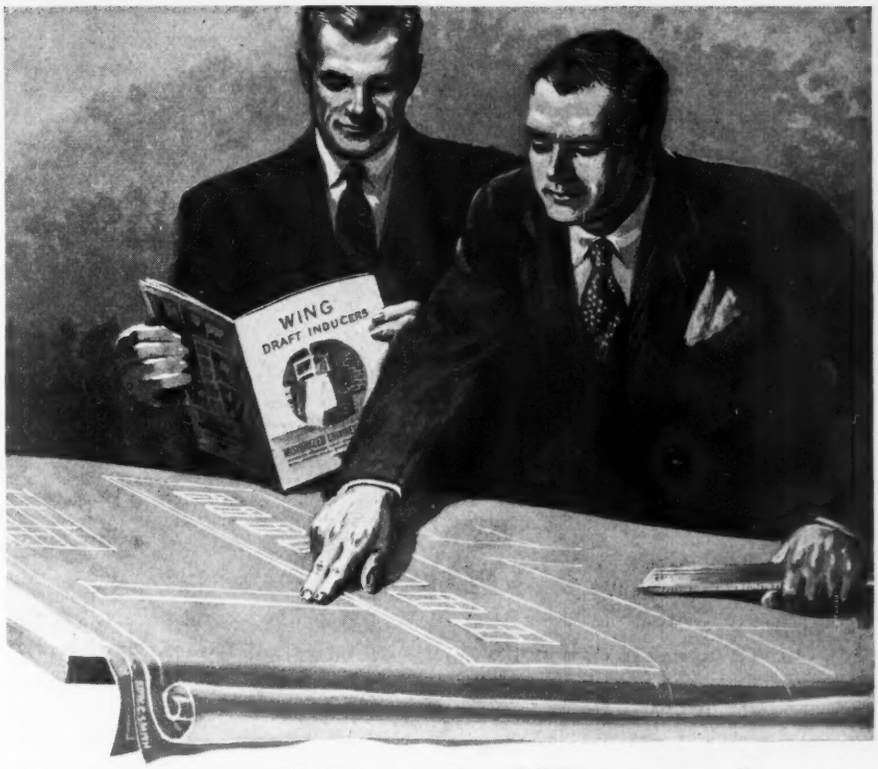
Avoid excessive Pressure in zoned steam Systems

MORE AND MORE oilheating equipment dealers are taking an interest in zoned heating plants. That's because of the important advantages that come of installing many room thermostats in large homes and commercial-industrial buildings, instead of using just one room thermostat.

Steam systems which are zoned tend to have a peculiarity which oilheating experts should know about beforehand —before a steam boiler does a trick that puzzles the man who laid out the system connected to it, or the man who has to service the job.

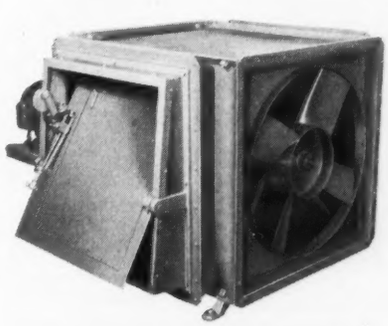
Blowing off of steam from the pop safety valve on the steam boiler connected to a zoned heat system is the trick to look out for.

You wind up with, say, two to six motorized steam valves on either a one-pipe or two-pipe steam job. You probably did a thoroughly good job of arranging things so that the boiler generates steam for heating only when one or more of the motorized valves is open. You get that feature by providing each motorized steam valve with an auxiliary switch that's on only when the valve is open. Over the boiler, you've got a steam pressure control to serve as a high limit control. It's set for perhaps five pounds maximum pressure, so you think there'll never be higher pressure than that on the boiler. Everything works all right when you test out



"...Let's cut this stack off here and put a Wing Draft Inducer on the boiler...We'll save the cost of the chimney, have better draft and a better looking building."

If you are building or rebuilding or increasing the size of your boiler plant, a costly, tall chimney can add considerably to the expense. And a well planned architectural design can be ruined with an unsightly, towering stack.

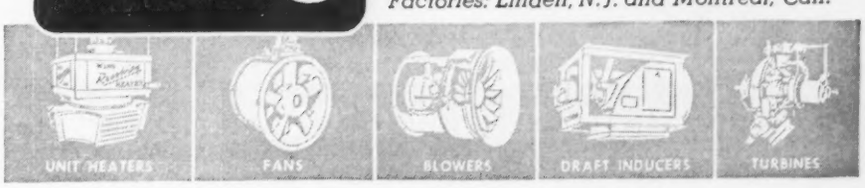


WING DRAFT INDUCERS eliminate this problem, providing positive, adequate, uniform draft regardless of surrounding conditions, or variable weather. They cut operating costs too, by giving higher CO_2's. Smoking is reduced or eliminated. Higher boiler capacity is possible.

Write for Bulletin I-52

Wing

L. J. Wing Mfg. Co.
66 Vreeland Mills Road
Linden, New Jersey
Factories: Linden, N.J. and Montreal, Can.



MAIL COUPON TODAY

AMERICAN SAND-BANUM COMPANY, INC.
9 Rockefeller Plaza, New York 20, N. Y.

FIRM NAME .....
ADDRESS .....
CITY .....ZONE .....STATE .....
BY .....

Make Customers and *Profits* with

Instant Acting
SABANOL
THE HOMOGENIZING FUEL OIL TREATMENT

the modern means of fuel oil control . . . eliminates sludge and corrosion problems . . . wins customer confidence and continuance . . . imparts clean and maximum burnability to ALL grades of fuel oil.

AMERICAN SAND-BANUM CO.
Established 1926
9 Rockefeller Plaza
New York 20, N.Y.

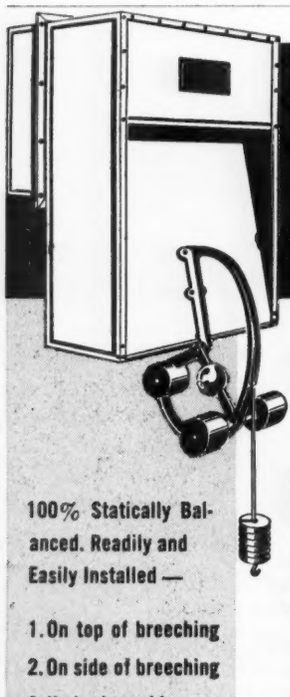
the job, so you think you're all set.

Then the boiler proves it can do tricks! On a cold morning, the owner phones you to say that the boiler room is full of steam. The pop safety valve over the boiler opened wide, emitted a blast of steam. Most of the insulation got washed off the top and sides of the boiler, and the boiler room is a mess!

Old-timers at steam systems which are zoned know what happened. Even though the high limit control was set for, say, five pounds pressure, more than 15 pounds pressure built up in the boiler and caused steam to pour from the boiler's pressure-relief valve.

How could steam pressure of 15 pounds build up in the boiler while the high limit control was set to stop the burner at five pounds pressure? That's the $64 question! Oldtimers at working on zoned steam systems know the answer; newcomers to this field don't.

Now, this does not happen every day. It happens only once in a while—on the days the boiler pops its safety valve, which may be a few times a year, or only once in two or three years. Here's what happens then. With all or most of the radiation load on the boiler for an hour or two on a severely cold morning, the oilburner runs continuously, bringing its firebox up to maximum heat. Then it just happens that all of the motorized steam valves close at the same time or within a few minutes of one another. At this moment the boiler pressure is five pounds, but within the next few minutes heat from the red-hot firebox builds it up to 15 pounds, and the boiler's pop valve opens and lets out the blast of steam.



You make money by saving customers money!

with a
PREFERRED
Barometric
DRAFT-A-JUSTOR

100% Statically Balanced. Readily and Easily Installed —

1. On top of breeching
2. On side of breeching
3. Under breeching
4. At base of chimney

It pays for itself in a few months and gives *years* of clear profit thereafter.

- Saves 10-30% in Fuel
- Insures Uniform Draft
- Increases CO_2 Percentage
- Reduces Boiler Maintenance
- Ventilates Boiler Room
- Available in All Sizes.

Approved by Underwriters' Laboratories, Inc.

PREFERRED UTILITIES MFG. CORP.
1860 BROADWAY Dept. OH-1 NEW YORK 23, N. Y.

SAFETY SWITCH
THAT SHUTS OFF FUEL IF BLOWER FAILS

Protection for Oil Burners • Industrial Ovens • Power Gas Burners

WHAT IT DOES

The Dewey Safety Air-flow Switch protects against opening of fuel valve until fan is up to speed.

Insures purging of furnace before fuel valve opens. Closes fuel valve if fan slows up or stops. Flashes danger signal if fan or fuel stops. Safeguards against danger from gas fuel failure when used in connection with safety shut-off valve.

Thousands sold. Factory Mutual and Underwriters Laboratories Approved. Standard equipment on leading products. Write for prices and literature.

DEWEY GAS FURNACE CO.
100 E. Baltimore Detroit 2, Mich.

FREE CIRCULAR

Dewey SAFETY AIRFLOW SWITCH

An ingenious pipefitter ended the trouble on one job, following a pipefitter's line of reasoning. In parallel with the largest motorized steam valve in the system, he piped a new pressure relief valve adjusted to open at 12 pounds pressure. When the boiler pressure rose to 12 pounds, this new relief valve opened and fed a blast of steam to the zone with the largest radiation load in the system. At 12 pounds pressure, enough steam escaped from the boiler to prevent opening of the regular pop valve, set to open at 15 pounds.

If you'll think in terms of electrical controls instead of in terms of pipefitting, you'll prefer this method. Install a steam pressure control set at about three pounds higher pressure than the oilburner's high limit control is set. Wire this new control to open the largest motorized steam valve, even though the room thermostat of the largest zone indicates this steam valve should be closed, at times when the boiler pressure tends to be excessive. Automatically, then, the largest zone load will be placed on the boiler when the steam pressure in the boiler becomes excessive—reaches about eight pounds.

Actually no steam is wasted as the result of feeding steam to the zone that has the largest radiation load, when the boiler pressure tends to become excessive, because this happens only on coldest days when zones need much heat.

Where a boiler provides heat from many zones—say more than six—and none of the zones is much larger than the others, you may have to wire up so that two motorized steam valves open when the boiler pressure tends to be excessive.

One big tankless Heater for two 90 hp Boilers

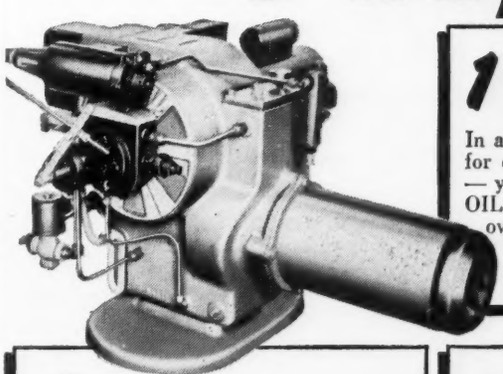
"YOU ARE unbalancing things by putting a big tankless water heater in just one boiler," the owner of an apartment house complained to the burner dealer who was showing him plans to convert to oil. "To balance the water heating load on both boilers, put a half-size tankless water heater in each boiler."

The 85-family apartment house being discussed had two 90 hp boilers. During the winter, steam from these provided hot water. It heated two steam coils in two 1,500-gallon hot water tanks. When no heat was needed, the superintendent worked several valves so that a little 25 hp boiler provided the steam for the hot water tanks. Coal-fired, the three boilers used 650 tons of coal a year, in round numbers. The heating system was one-pipe steam type. Figuring on firing No. 6 oil in the two big boilers, the burner dealer planned to scrap the 25 hp boiler and use one big tankless water heater, in one 90 hp boiler, for summer-winter hot water.

"If I do as you say and put a half-size tankless water heater in each 90 hp boiler, we'll have to use both boilers in summer to heat water," the dealer pointed out to the owner. "That'll double the standby loss by keeping two big boilers hot in summer instead of one. It will waste a few thousand gallons of oil a year."

(*Please turn to page 154*)

HEV-E-OIL® Burners give you a big deal 3 ways!



1 BIG profits

In a typical locality, figures* show that for every $100 profit on a light oil job — you make $400 to $500 on a HEV-E-OIL installation. No extra work or overhead. Installation and service easy as any light oil burners. Replacement parts always available.

*On Request

2 BIG fuel users

Sell the big fuel user burning 6,000 gals. of oil, 45 tons of coal or heating a building with 1500 sq. ft. of radiation. Sell apartments, business buildings, churches, hospitals, hotels, institutions, laundries, industrial plants, warehouses, etc.

3 BIG repeat business

Top performance keeps users "sold" — proven by a long list of *repeat* buyers. Big fuel savings possible! HEV-E-OIL Burner uses No. 4 or 5 oil, costing 20% to 30% less per gal., with 8% to 10% *more heat* than light oil.

Find Out For Yourself... How the HEV-E-OIL Burner can help you make money on the big demand for heavier, lower-cost fuels. There are plenty of cost-conscious commercial and industrial prospects in your territory. So — get the biggest deal in modern heating profits — write for all the facts on the HEV-E-OIL Burner NOW!

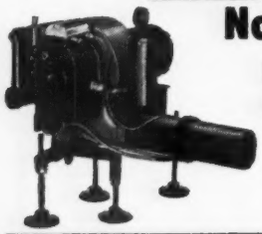
HEV-E-OIL Burners are low-pressure, air-atomizing type burners. The only modern oil burners designed especially to burn low-cost No. 4 or 5 oil without pre-heating.

Ask for your copy of the NEW Planned Promotional Booklet — it's crammed with hard-hitting selling aids for you.

BURNER DIVISION • CLEAVER-BROOKS COMPANY

Dept. A-378 E. Keefe Avenue, Milwaukee 12, Wisconsin

★ RAYFIELD AUTOMATIC ★



No. 5 OIL BURNERS

REDUCE HEATING COSTS...
INCREASE YOUR PROFITS

Burn No. 5 heavy fuel oil. Self-contained, all electric. Self-lubricating. Many new exclusive features. Write for full details.

GOOD TERRITORIES OPEN

C. L. RAYFIELD CO.
2010-18 S. Halsted St., Chicago 8, Ill.

RAJAH TERMINALS

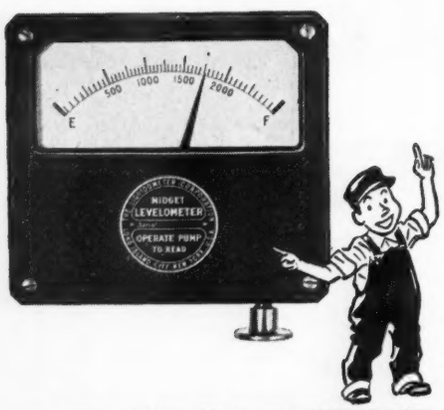
FOR OIL BURNER SPARK PLUG IGNITION CONNECTIONS
Made in Two Styles
CRIMP TYPE and SOLDERLESS

Code No. C/T #11

Code No. S-SOS #11

THE RAJAH CO., 35 Verona Ave., Newark, N. J.

A GOOD GAUGE COMPLETES A GOOD INSTALLATION



LEVELOMETER
Tank Gauges
"THEY'RE ALWAYS DEPENDABLE"

"LIQUIDS WORTH STORING ARE WORTH MEASURING"

THE LIQUIDOMETER CORP.
36-19 SKILLMAN AVE., LONG ISLAND CITY, N.Y.

Manufacturers' Activities

Levine at GE meeting predicts big Year for Airconditioning

AN INCREASE of more than 100% in sales of central system airconditioners in 1954 was predicted by S. J. Levine, general manager of the General Electric Company's Home Heating & Cooling Department, Bloomfield, N. J., at the first showing of G-E's new line of home cooling equipment in New York.

He estimated that central units would be installed in more than 120,000 homes next year compared with 50,000 installations this year. He said "Sales of central systems should pass those of packaged cooling equipment sold for installation in commercial establishments in 1954, and by 1955 they should overtake room cooler sales in dollar volume."

His long range prediction was that by 1963 annual sales of central system home units would be close to the million mark.

Part of G-E's 1954 line will be produced at Trenton, N. J., in a recently acquired plant.

U. S. Radiator to sponsor School for field Personnel

J. ROY KNOX, vice president of sales for the United States Radiator Corp., Detroit, Mich., has announced an airconditioning school for the entire field personnel.

The seven-week school will cover all phases of design, calculation, and specification of summer cooling in combination with winter heating.

Lorin G. Miller, Dean Emeritus of the College of Engineering, Michigan State College, will supervise the course. Dean Miller has worked with trade associations in the heating field and has prepared manuals, organized and conducted heating schools for the National Warm Air Heating and Air Conditioning Association, Institute of Boiler and Radiator Manufacturers and the National Sheet Metal Association.

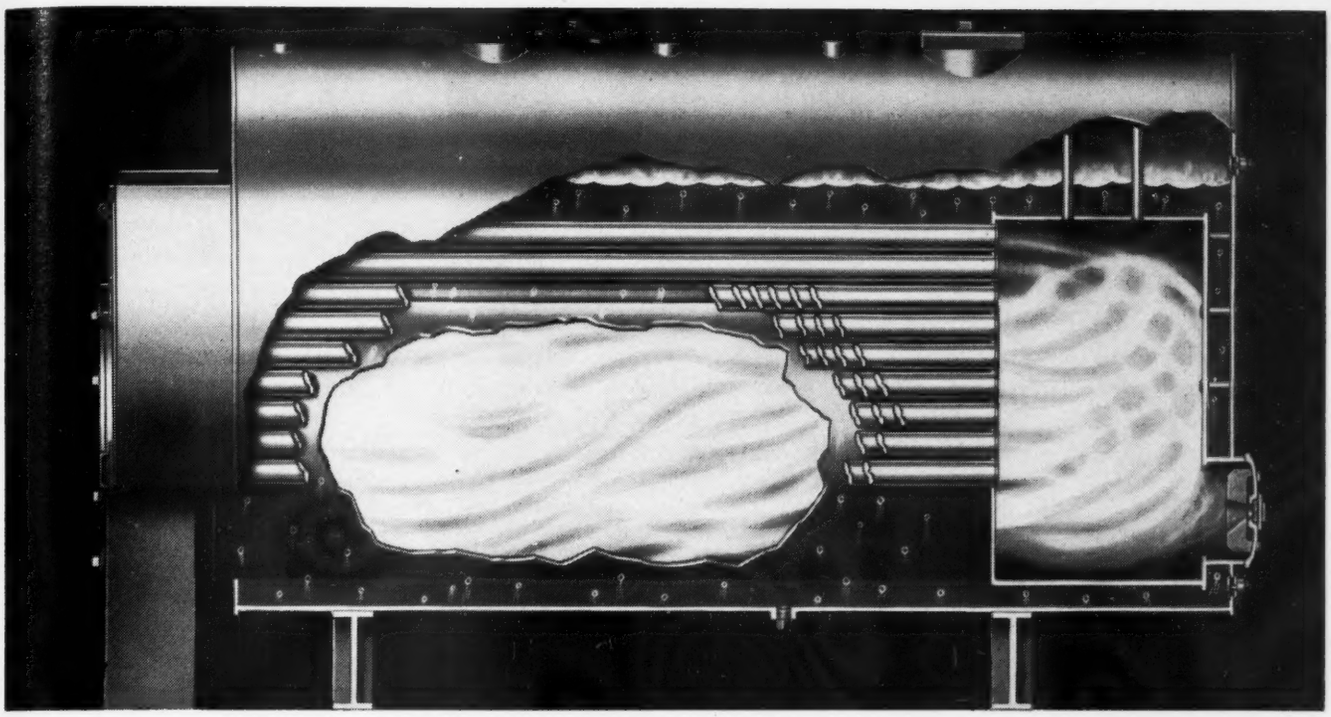
Airtemp plans more Production of air-cooled Conditioners

CHRYSLER'S Airtemp Division, Dayton, O., will produce four air-cooled residential airconditioners for each water-cooled unit in 1954, according to Airtemp president, Carl E. Buchholzer.

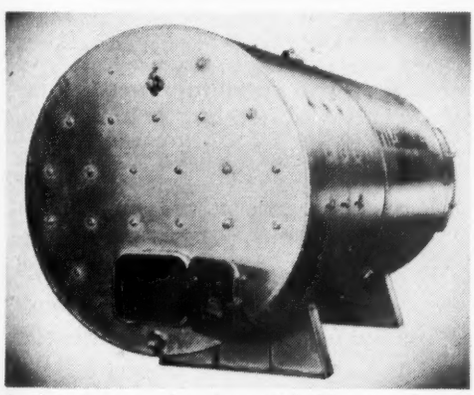
Speaking at the Eighth All-Industry Air Conditioning Exposition in Cleveland, Mr. Buchholzer said that the swing to large-scale production of air-cooled units is a trend now developing within the industry. Airtemp will introduce a new air-cooled unit for installation in stores and buildings.

Tight water usage curbs in many parts of the country have advanced the acceptance of the air-cooled unit. Since Airtemp's air-cooled models were introduced last May they have exceeded the sale of water-cooled units by 54%.

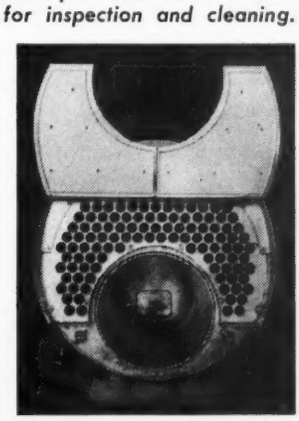
Also, Dayton facilities of Chrysler Airtemp are being expanded to house the furnace and room airconditioner manufacturing operations. The new building will have about 93,000 square feet of space.



MORE ECONOMICAL BECAUSE IT'S *COMPLETELY* WATER-JACKETED



Insulated access door is provided in rear of combustion chamber for inspection and cleaning.



Lifting the front access door exposes all tubes for cleaning.

THE FITZGIBBONS BOILER®

"Scotch Type" saves on fuel and installation

Complete water-jacketing of *all* heating surfaces in this popular Fitzgibbons low pressure boiler means savings every step of the way—from installation to actual operation of equipment.

Specially important is the *water-cooled rear furnace wall.* This feature, not obtainable in many Scotch-type heating boilers, reduces flue gas temperatures, saves fuel, and eliminates the original expense of the usual rear dry-wall refractory lining and its high maintenance costs.

With a low water line, this boiler is ideal for locations where low headroom is a necessity or where excavation costs because of rock or water would be prohibitive.

For complete details, write to the Fitzgibbons Boiler Company, Inc., 101 Park Avenue, New York 17, N. Y. Ask for Catalog FO-1.

SBI

SINCE 1886 MOST ECONOMICAL IN FUEL 1886 THE FITZGIBBONS BOILER

THE FITZGIBBONS BOILER®

fueloil & oilheat

Also under construction are: a 30,000 square foot by-products disposal structure; a 63,000 square foot outside storage area and crane bay; and a new employee parking lot.

G-E has merchandising Kit and control exchange Plan

A MERCHANDISING KIT to aid franchised distributors of General Electric domestic oilburner controls has been issued by G-E's appliance control department.

Ten separate items make up the kit: Technical bulletins; fact-sheet on the entire line; advertising mats; radio-television spots; window decals; envelope stuffers; stickers; customer check list; replacement sliderule which compares G-E controls to those of other manufacturers; and service manual.

G-E also has instituted a service and exchange plan for franchised distributors of its home heating controls. By keeping a set of controls in his service truck, a dealer can install a new control quickly and return the inoperative unit to his distributor. He in turn ships accumulated controls to the plant at Morrison, Ill., and reconditioned controls are shipped back to him. For this service the dealer pays rebuilt prices or nothing at all if the control is in warranty. Replacement controls are covered by the same warranty as new controls.

American-Standard issues new home planning Booklet

"PLUS VALUE FOR YOUR HOME," a planning booklet for homeowners, builders and buyers has been issued by American-Standard, Pittsburgh, Pa. It is a new edition of the previously distributed "Home Book" and shows in full-color photograph products in the American-Standard line.

Selling to retailers for ten cents a copy, the booklet is divided into three sections which are available for five cents each. In the section on hot water heating are included baseboard panels, radiators and convectors, along with information on boilers. All the equipment is pictured in color and installed in modern rooms.

Servel to introduce new Line at regional sales Conferences

SERVEL'S new line of 1954 airconditioning equipment will be introduced to distributors and dealers at six regional sales conferences in January.

Dates and places for the conferences are as follows: January 4, Los Angeles; January 6, Houston; January 8, Dallas, Texas; January 11, Atlanta, Ga.; January 13, New York; January 15, Chicago.

John A. Gilbreath, assistant vice president in charge of airconditioning and H. R. Nielsen, airconditioning sales manager are in charge of the regional meetings.

General Controls dedicates appliance Controls Plant

A NEW PLANT which will be used for expanded manufacturing of appliance controls was dedicated in Burbank, Calif., by General Controls Co., Los Angeles, Calif., producers of automatic temperature, pressure and flow controls.

"SOLD MORE THAN 175 Bethlehem DYNATHERM completely automatic PACKAGE UNITS FIRST YEAR IN BUSINESS!"

says

WARREN SUPPLEE
of Camden, N. J.

"There's no real secret to selling the Bethlehem Dynatherm, believe me! Less than one year ago I took on the Bethlehem line with no experience whatsoever with oil burners. I did know, however, that when you offer the public something really new that gives them more for their money in fuel economy, in compactness, comfort and convenience, your sale is easier. Then too, the Bethlehem Dynatherm is completely assembled at the factory, reducing installation costs.

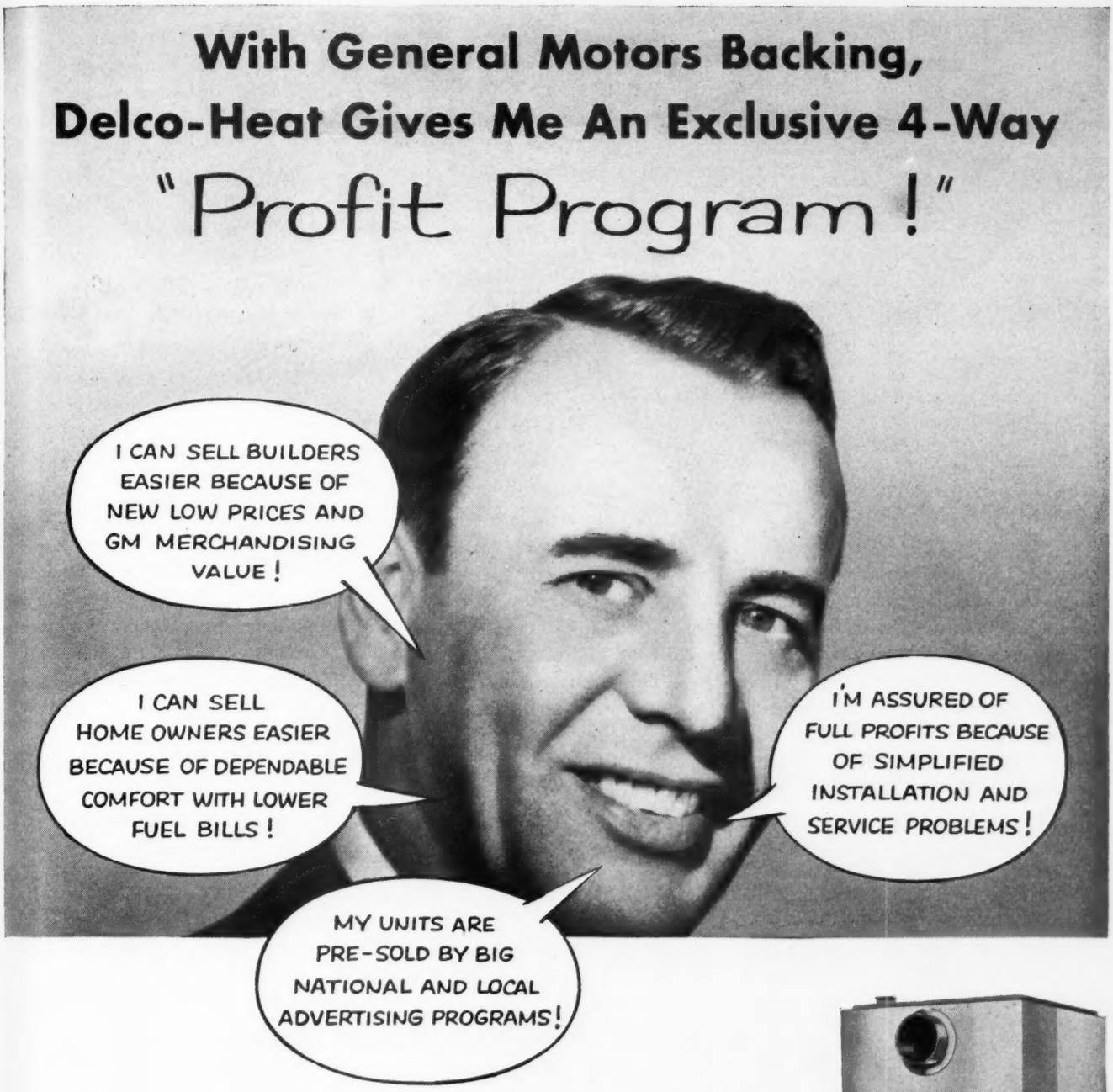
"What's more, right now I've got more than 175 satisfied customers who are proving to be my best salesmen—my best advertising. By the way, my goal for 1954 is 500 units!"

Remember - - - You, too, can sell the Bethlehem Dynatherm with Pride, Confidence and PROFIT!

A few exclusive Bethlehem Dynatherm territory Franchises are still available.
Wire or write immediately for full information.

BETHLEHEM FOUNDRY & MACHINE COMPANY
BETHLEHEM, PENNSYLVANIA

With General Motors Backing, Delco-Heat Gives Me An Exclusive 4-Way "Profit Program!"

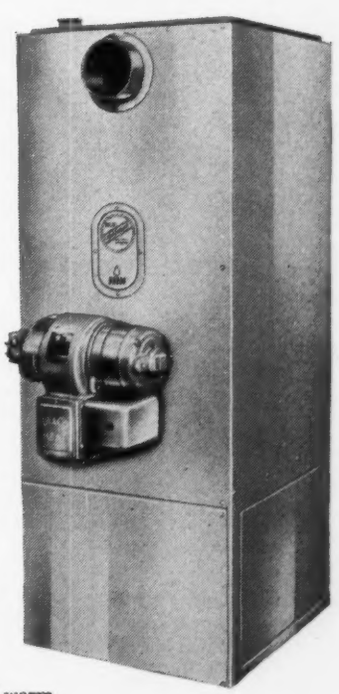

I CAN SELL BUILDERS EASIER BECAUSE OF NEW LOW PRICES AND GM MERCHANDISING VALUE!
I CAN SELL HOME OWNERS EASIER BECAUSE OF DEPENDABLE COMFORT WITH LOWER FUEL BILLS!
I'M ASSURED OF FULL PROFITS BECAUSE OF SIMPLIFIED INSTALLATION AND SERVICE PROBLEMS!
MY UNITS ARE PRE-SOLD BY BIG NATIONAL AND LOCAL ADVERTISING PROGRAMS!

It's the biggest money-making franchise in the industry!

General Motors makes Delco-Heat! That's the big story of the year in home heating! It means *lower cost* because Delco-Heat is GM "assembly line" built, and more heat from fuel because it's GM precision engineered. No wonder dealers everywhere are finding the Delco-Heat franchise the shortest, most direct way to greater profits!

The value leader Model OBC75-H is a space-saving Oil Fired Conditionair package unit with 75,000 Btu output. Exclusive mass production wrap-around design, steel cabinet and Circle-Air Radiator that adds extra heating surface—improves efficiency. Quik-Action stainless steel combustion chamber, Delco-Heat Pressure Oil Burner powered by vibration-free Rigidframe Motor, Centrifugal Blower and replaceable air filter.

Get the facts about the new franchise territories available now. Write to Delco Appliance Division, Dept. FO, General Motors Corp., Rochester 1, N.Y.



GM GENERAL MOTORS

DELCO-HEAT For a good deal— DEAL WITH DELCO

... a complete line of automatic oil and gas-fired conversion burners, Conditionair forced warm air furnaces and heating and cooling units, boilers, water heaters, and electric water systems.

H. W. Shirey, *manager of the Combustioneer Division, Steel Products Engineering Co., Springfield, Ohio, checks a station wagon demonstrator. By opening the station wagon door, pulling the burner out and plugging it into any 110 volt outlet the salesman is ready to make a demonstration to the dealer right in front of his store.*

The two-day dedication and open house featured a 240-foot panoramic exhibit showing advancements in control application since General Controls Co. was founded 23 years ago.

The 120,000 square foot plant has been designed to provide facilities for approximately 1,000 employees.

Heil moves Eastern District sales Office to Union, N. J.

EASTERN DISTRICT sales office of the Heil Co., Milwaukee, Wisc., has moved from Hillside, N. J. to Union, N. J. This separates the sales offices from the Hillside factory operation of the company.

The eastern office handles sales to distributors in New Jersey, Eastern New York and Pennsylvania, Connecticut, Rhode Island, Massachusetts, Vermont, New Hampshire and Maine.

Petroleum transport truck sales are handled by Edward Casey and George Robertshaw; Karll Mould and Charles Kahl handle automatic heating sales.

G-E Holland, Mich., Plant for Hermetic Motors Division

GENERAL ELECTRIC CO., Schenectady, N. Y., plans to build a multimillion dollar plant and headquarters at Holland, Mich., for its Hermetic Motor Department of the Component Product Division.

The new installation will be a single-story structure using the latest fabricating equipment and methods. Much of the manufacturing area will be air-conditioned to maintain cleanliness.

It is expected that the plant will be in operation in 1955. More than 400 people, predominantly women, will be employed.

FEATURE AFTER FEATURE
...BY FAR THE FINEST!

Klemm
FUEL OIL FILTERS

• Exclusive Cleanable CHEMISTONE Elements • 17 Models
• Choice of Glass or Metal Bowls • Shut-Off Valve (Optional)

The many exclusive customer-pleasing features that you get in Klemm Fuel Oil Filters are positive evidence of quality construction and performance. Repeat sales assure you of lucrative and continued earnings. For safety, economy of operation and trouble-free performance, you'll find it pays to recommend and sell Klemm Filters. See your jobber . . . or write direct.

CHEMISTONE—Genuine filter, not a mere strainer! Traps moisture . . . removes dust, rust and scale to 1/14,000 of an inch.

Klemm PRODUCTS
DIVISION OF
KLEMM AUTOMOTIVE PRODUCTS COMPANY
1722 North Damen Avenue, Chicago 47, Illinois
EXPORT: Quiterman Co., Inc., New York 4, N. Y.
CANADA: Elgee, Ltd., Toronto

Exclusive: All models available with metal or glass bowl. Other popular I. P. T. sizes.

Model FF-530-V—3/8" opening
For: Central heating plants.

Model FF-430-G—3/8" opening
For: Central heating plants.

Model JR-60—1/4" opening
For: Space heaters, floor furnaces, etc.

*Model JR-80—1/4" opening
For: Space heaters, floor furnaces, etc.

*Model FF-430—3/8" opening
For: Central heating plants.

OIL BOILERS ★ OIL FURNACES

by Iron Fireman

You can cover the whole oil field with Iron Fireman

You are really "set" with the Iron Fireman line. Furnaces range from 52,000 to 270,000 Btu. output rating; from lower cost gravity models to complete winter air conditioners.

Boilers range from 100,000 to 270,000 Btu. at boiler outlet, with large capacity coils for household hot water, if desired. They are exceptionally fast heaters.

Iron Fireman oil boilers and furnaces are trim, sleek, handsome—a credit to any home.

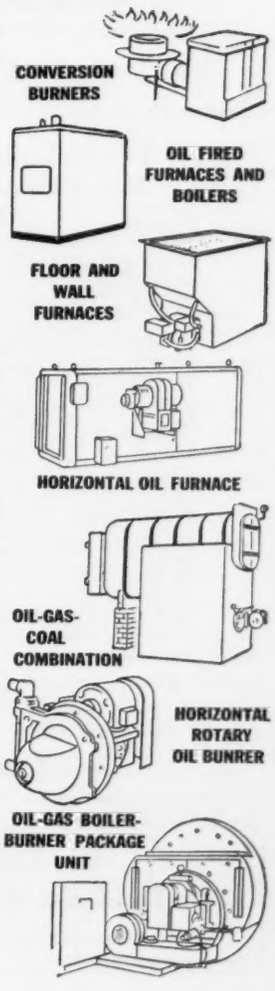
Iron Fireman Vortex oil burners, with whirling radiant fire at grate line level, are outstandingly efficient and economical conversion burners, as thousands of users will testify.

Tops in customer satisfaction

A source of satisfaction to users and dealers alike is the complete dependability of Iron Fireman equipment. Trouble-free comfort in the home translates itself into profitable business for *you.*

Loaded with strong selling points

The Iron Fireman oil fire is *different.* It has a whirling, bowl shaped flame which blankets every inch of the primary heating surfaces with rich, penetrating, radiant heat. This means more heat from every drop of oil. The flame reaches top efficiency in a few seconds, making Iron Fireman furnaces, boilers and conversion burners very responsive to thermostat control and ideal for "fast cycling."



Most complete franchise in the entire automatic heating field

1. The unique features and outstanding fuel economy that are built into the Iron Fireman Vortex oil burner make it easy to sell.

2. The Iron Fireman trademark, with 27 years of continuous national advertising and user satisfaction behind it, gives all Iron Fireman equipment exceptional salability.

3. Iron Fireman has a complete line of residential, commercial, and industrial oil burning equipment.

4. There's automatic equipment . . . a full line . . . for gas and coal too.

5. Iron Fireman dealers receive strong company backing which includes local advertising, merchandising, sales training, and engineering assistance.

Excellent territories available. Write for information to Iron Fireman Manufacturing Company, 3115 West 106th Street, Cleveland 11, Ohio

G-E announces price Decrease on heat Pumps

REDUCTIONS of 20 to 25% on General Electric heat pumps were announced by H. M. Brundage, general manager of the G-E Weathertron Department. The Weathertron heats in winter without using fuel and cools in summer without using water. All-electric, it is completely automatic in operation.

Mr. Brundage said that prior to the price reduction the installed cost of the Weathertron in a home ranged from $3,000 to $4,000 depending on the ductwork and size of home. The reduction affects only the product.

G-E started marketing the Weathertron in 1951. It is sold principally in the South, Southwest and far West, but the company now expects to expand distribution northward because of the price reduction.

Remington Corp. Sales up 97%; Directors vote 10% Dividend

SALES FOR THE FISCAL year ending October 31 were 97% higher than the same period last year for the Remington Corp., Auburn, N. Y. Herbert L. Laube, president, announced that the directors of the company have voted a 10% dividend.

Combined sales at home and abroad of window and console room airconditioners amounted to $6,407,414 as compared to $3,246,811 last year.

Scully Signal Co. moves Departments to new Quarters

SCULLY SIGNAL CO. has moved its production and engineering departments to 180 Green St., Melrose, Mass. Temporarily the main office will remain at 88 First St., Cambridge, Mass., until adjacent space in Melrose is ready.

Acme Heating appoints nine Distributors in New England

AN ADDITIONAL part of the expansion program of Acme Heating Division of The United Tool & Die Co., West Hartford, Conn., includes the naming of nine new distributors in New England.

Four outlets are in Massachusetts: Worcester, Framingham, Lowell, and Holyoke. Others are in Brattleboro and Barre, Vermont and Biddeford, Portland and Augusta, Maine.

Heil Co. district Managers meet for sales Conference

DISTRICT OFFICE sales managers of the Heil Co., Milwaukee, Wisc., met at Lake Delavan, Wisc., for a sales conference, November 22 through 25.

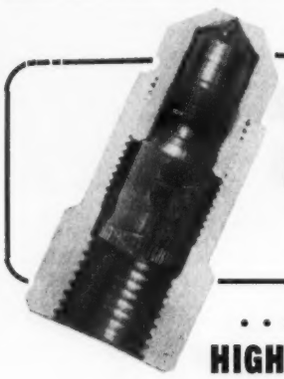
A treasure chest packed with selling gimmicks served to represent each division. Each manager was given time to present a successful sales activity.

Salesmen from the 11 district offices met in Milwaukee earlier in the month for a four-day merchandising conference. George E. Hockstein, sales manager, and William A. Matheson, Jr., conducted the sessions.

National Radiator buys Assets of Viking Air Conditioning

NATIONAL RADIATOR Co., Johnstown, Pa., has purchased the principal assets of the Viking Air Conditioning Corp., Cleveland, Ohio.

The president of Viking, Marion I. Levy, has been elected a vice-president of National Radiator,



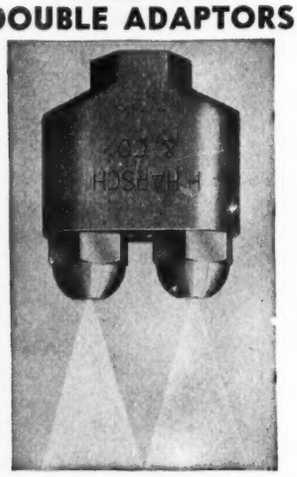
this HARSCH Nozzle is the Talk of the Entire Industry!

. . . it offers an unbeatable combination:
HIGHEST QUALITY + DEPENDABLE RATINGS + LOWEST PRICES = the NOZZLE for YOU!

You're assured of highest quality workmanship, dependable spray pattern, and a consistently reliable gallonage rating, when you BUY HARSCH

MEET the HARSCH FAMILY of QUALITY PRODUCTS

SINGLE and DOUBLE ADAPTORS



19 NOZZLE KIT

STRAINERS

It will pay you to standardize on HARSCH: Send for full Data and Prices NOW!

H. HARSCH & CO.
230 TUSCAN ROAD MAPLEWOOD, N. J.
Kresno-Stamm Mfg. Co. (Canada) Ltd., Montreal, Canada

New 1954 Chevrolet Trucks

New Power! New Economy! New Features you want!

New Chevrolet trucks for '54 are here to do your hauling or delivery job faster, more efficiently and more economically.

To begin with, they bring you thrifty new power in *all* models. You save time on every trip with extra reserves of high-compression horsepower under the hood—and you enjoy greatly increased operating economy as well.

In addition, these great new Chevrolet trucks offer new and even greater dependability with increased ruggedness throughout the chassis. You'll find heavier axle shafts in 2-ton models . . . bigger, more durable clutches in light- and heavy-duty models . . . more rigid frames in *all* models. Pickup and stake bodies are plenty rugged, too—and they're roomier for '54!

But that's only the beginning! You enjoy new cab comfort, convenience and safety. Instruments are easier to read . . . controls are easier to reach. A new one-piece curved windshield gives you greater visibility. The new Ride Control Seat* lets you drive in relaxed comfort hour after hour, over all kinds of roads. Seat cushion and back move as a unit to "float" you over bumps without back-rubbing.

In another great advance, new Chevrolet trucks offer you the last word in no-shift driving ease and convenience. With proved truck Hydra-Matic transmission* you can drive all day and make door-to-door deliveries without shifting or clutching. Fact is, there *is* no clutch!

These are some of the many big new benefits awaiting you in the new Chevrolet trucks for '54. Why not plan to get the whole money-saving story at your Chevrolet dealer's soon! . . . Chevrolet Division of General Motors, Detroit 2, Michigan.

Most trustworthy trucks on any job!

CHEVROLET

ADVANCE-DESIGN TRUCKS

CHEVROLET ADVANCE-DESIGN TRUCK FEATURES

THREE GREAT ENGINES—The new "Jobmaster 261" engine* for extra heavy hauling. The "Thriftmaster 235" or "Loadmaster 235" for light-, medium- and heavy-duty hauling. **NEW TRUCK HYDRA-MATIC TRANSMISSION***—offered on ½-, ¾- and 1-ton models. Heavy-Duty **SYNCHRO-MESH TRANSMISSION**—for fast, smooth shifting. **DIAPHRAGM SPRING CLUTCH**—improved-action engagement. **HYPOID REAR AXLE**—for longer life on all models. **TORQUE-ACTION BRAKES**—on all wheels on light- and medium-duty models. **TWIN-ACTION REAR WHEEL BRAKES**—on heavy-duty models. **DUAL-SHOE PARKING BRAKE**—greater holding ability on heavy-duty models. **NEW RIDE CONTROL SEAT***—eliminates back-rubbing. **NEW, LARGER UNIT-DESIGNED PICKUP AND PLATFORM STAKE BODIES**—give increased load space. **COMFORTMASTER CAB**—offers greater comfort, convenience and safety. **PANORAMIC WINDSHIELD**—for increased driver vision. **WIDE-BASE WHEELS**—for increased tire mileage. **BALL-GEAR STEERING**—easier, safer handling. **ADVANCE-DESIGN STYLING**—rugged, handsome appearance. *Optional at extra cost. Ride Control Seat is available on all cab models, "Jobmaster 261" engine on 2-ton models, truck Hydra-Matic transmission on ½-, ¾- and 1-ton models.

MORE CHEVROLET TRUCKS IN USE THAN ANY OTHER MAKE!

and will be general manager of the Viking Air Conditioning Division.

Viking, producer of blowers, humidifiers, attic and window fans, has recently entered the window airconditioning unit field. No changes are contemplated in Viking's personnel or manufacturing policies.

At ceremonies—*National Radiator Corp. takes over Viking Air Conditioning Corp. Viking is represented by (left to right): Herbert L. Klein, general manager; Marion I. Levy, former president. From National Radiator are: John dePass, assistant secretary, T. B. Focke, president, and B. C. Straub, comptroller.*

Enterprise Brass Works opens oil equipment sales Division

THE ENTERPRISE Brass Works, Muskegon, Mich., is now marketing a line of valves, fittings and accessories for the oil industry through an Oil Equipment Sales Division.

For the past 50 years, these products have been used by original equipment manufacturers, now they will be available to oilheating dealers.

Sid Harvey opens 27th Outlet in Worcester, Mass.. Store

M. P. BERNARD, president of Sid Harvey of Mass., Inc., Boston, announced that they have taken over the County Supply Co., Inc., in Worcester, Mass. Long a jobber of Sid Harvey replacement parts, the store will now put in a complete stock of automatic heating supplies and will be operated as a branch. This brings to 27 the total of Sid Harvey stores.

❖

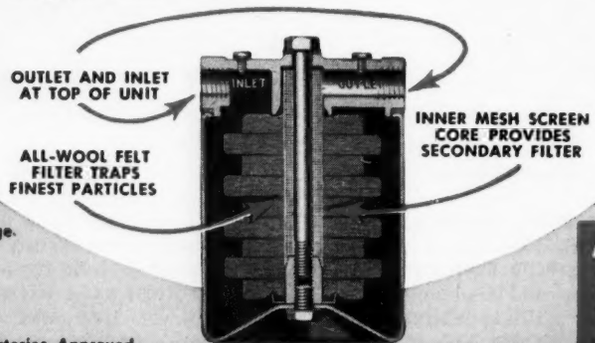
Harry G. Johnson has been appointed general manager for Klemm Automotive Products Co., Chicago manufacturers of automotive and fueloil filtering equipment. Johnson formerly represented the company throughout the southeast part of the country.

❖

Burt Vickery named sales representative for Virginia, North Carolina and South Carolina by Sun-Ray Burner Manufacturing Corp., Jamaica, N. Y.

Best FOR SERVICE... Best FOR CUSTOMERS
General FUEL OIL FILTERS

Veteran oil burner servicemen call *General* Fuel Oil Filters "the best money can buy." Two-fold, positive filtering removes the finest particles, improves operation of oil-fired furnaces, water heaters, space heaters. Service "call-backs" are eliminated, too, since the General 1A-25 and 2A-700 allow only *clean* oils to pass—greatly reducing possibilities of clogged burner nozzles.


OUTLET AND INLET AT TOP OF UNIT
ALL-WOOL FELT FILTER TRAPS FINEST PARTICLES
INNER MESH SCREEN CORE PROVIDES SECONDARY FILTER
INLET
OUTLET

- Finest filtration
- Easily replaced *all-wool* cartridge.
- Clogged fuel lines eliminated
- Compact — easy to install.
- *Double protection* filter design.

General Filters Are Underwriters' Laboratories Approved

Remember —Plugged flues cost heating dollars! CLEAN RIGHT Soot Remover removes a ½" layer of of soot in 2-5 minutes . . . safely and thoroughly. Made for General Filters, Inc.

GENERAL FILTERS INCORPORATED GENERAL FUEL OIL FILTERS 43800 GRAND RIVER AVE. NOVI, MICHIGAN

Canadian Factory Branch: Canadian General Filters, Ltd., 2679 Danforth Avenue, Toronto 13, Ontario

Mueller Climatrol gives you the industry's most complete line...

Gas and oil boilers . . . winter air conditioners for gas, oil, coal . . . highboys, lowboys . . . counterflows . . . horizontal (attic) . . . steel gravity furnaces for all fuels . . . gas and oil unit heaters . . . gas and oil conversion burners . . . humidifiers . . . blower-filter units . . . furnace pipe, duct, and fittings . . . Muelleraire Small-Pipe Fittings . . . perimeter fittings . . . filters . . . registers and grilles . . . controls . . . residential and commercial cooling equipment.

—plus powerful advertising . . . hard-hitting dealer sales-helps . . . effective sales counsel

Tie up with Mueller Climatrol, the Big Name in Heating and Cooling, to enjoy a big edge on competition — and make more sales and profits. Write for details.

97th Anniversary

Mueller Climatrol

2050Z W. Oklahoma Avenue
Milwaukee 15, Wisconsin

Industry Groups

Activities of local and national industry associations are reported monthly in this department. Secretaries are invited to send reports of their Group's activities to reach the editor by the 18th.

Service Managers form two new Clubs in New Jersey

THE NATIONAL Association of Oil Heating Service Managers organized two new chapters in Monmouth and Atlantic Counties, New Jersey.

At a meeting on November 18, Harry Aumack, Wm. Fleur Co., was named acting chairman of the Monmouth County club. Irven Miller, Irven Miller Co., is the secretary.

Charter members of the group, in addition to Aumack and Miller, are: Harry B. Wardell, Point Pleasant-Bay Head Ice and Coal Co.; Arthur T. Shannon, John McGuire Co.; Thomas E. Farley, Lawes Coal Co.; Jerry Poling, P & L Co.; and Nicholas DeMaio, DeMaio Co.

In Atlantic City on November 19, the Atlantic County group was formed. J. Walter Reutschler, Devell Fuel Co., is acting chairman, with these charter members: Fred J. Sithens, Burkhard Fuel Oil Co.; Milton M. Siglin, McAllister Coal Co.; William E. Gabel, Atlantic City Coal Co.; and Joseph Ang, Mack Air Conditioning Co.

John Sibarium spoke to the Union County Service Managers on December 1 in Plainfield, N. J. His subject was "The future of oil heating lies in your hands." On December 8, he discussed "combustion testing and trouble shooting" at the Monmouth County Club in Red Bank, N. J.

There *is* a difference in fuel oils... and it's this Sinclair difference that makes it easier to switch prospects into customers. Sinclair Anti-Rust Fuel Oil contains the amazing rust inhibitor RD-119®. It protects against rust-clogged filters and burner nozzles.

You'll find this top quality fuel oil reduces service calls — builds good will and boosts your profits. Switch now to the fuel oil that's *really different*.

SINCLAIR FUEL OIL
with RD-119®

North Carolina Oil Jobbers elect Officers for 1954

AT THE NOVEMBER meeting of the North Carolina Oil Jobbers Association in Raleigh, N. C., Forest C. Roberts, Acme Petroleum and Fuel Co., was elected president. Other officers elected to serve with him are: vice-president, Swannie D. Bryan, Bryan-Cooper Oil Co.; and treasurer, G. E. Maultsby, Maultsby Oil.

Ten directors were elected: Carroll M. Barringer, Cities-Service; S. D. Bryan; Orris F. Dumas, Pure; G. Allen Ives, Shell; G. E. Maultsby; Jason K. Glenn, Shell; Frank H. Kenan, Pure; Thomas W. McCracken, Amoco; John Norwood, Socony-Vacuum; Roby E. Taylor, Richfield; and the outgoing president, S. D. Wooten.

James C. Little, attorney; W. A. Parker, executive secretary; and Don Ward, assistant to the secretary, were elected to succeed themselves.

OHI compiles Ads, Campaigns, comparative Costs in Booklet

A REPRESENTATIVE COLLECTION of newspaper advertisements and promotional material used by OHI chapters and other industry groups has been collected by the Distribution Division of the Institute, New York, N. Y., into a 56-page "Idea Book."

Included in the book are 133 reproductions of oilheat newspaper advertisements covering appeals to the home builder market, contest campaigns, plus regular statements of the advantages

NEW YEAR
NEW PLANT
NEW LINE

Autocar brings you even more for '54

This shot of the Los Angeles Freeway looks like an engineer's dream-highway for the year 2054. But the road of the future is here now—and on it are three mighty Autocars, tomorrow's tractors for today's hauling.

AUTOCAR looks upon the arrival of each new year as an opportunity to help you improve your operation. For example: In 1954 you will be offered a new series of Autocars, skillfully engineered, in perfect balance, all units complementing one another. And your Autocars will be better than ever in 1954, because we are shortly moving into a new plant which will incorporate every facility for the most efficient production of quality motor trucks.

AUTOCAR TRUCKS

Autocar Division of the White Motor Company
Ardmore, Pa.

•

Factory Branches and Distributors from Coast to Coast in the United States and Canada

Export Dept.: Drexel Bldg., Phila. 6, Pa., U.S.A.

of automatic oil heat over competitive systems.

A carefully worked out method for figuring oil versus gas fuel costs developed by OHI of New England has been included. The formula serves for adaptation to local fuel prices, degree day averages and representative average fuel consumptions.

Chapters contributed ad proofs and artwork which other chapters may use for their own advertising. In many cases mats of the sample ads are available from the Institute.

Only 200 of the Idea Books were printed, according to F. S. Burroughs, national secretary of the Distribution Division.

All chapter member groups were supplied with one copy. Extra copies are available to OHI members and certain other qualified groups at $6 a copy. "Each copy of the book is serially numbered and close restrictions will be maintained to confine additional distribution only to properly qualified industry organizations," Mr. Burroughs said.

COMFORT FOR THE HOME

SAFETY FOR INDUSTRY

MERCOID®
MERCURY SWITCH EQUIPPED
CONTROLS

There are no hidden contacts in Mercoid Controls—You can tell at a glance whether switch circuit is "ON" or "OFF"

FOR HEATING APPLICATIONS

Whether it's a room thermostat, stack safety control, operating or high limit control, there is a Mercoid mercury switch equipped control for the job. Write for bulletin 28i.

FOR INDUSTRIAL APPLICATIONS

You'll find Mercoid mercury switch equipped controls used in practically every major industry throughout the world—safeguarding costly equipment against the danger of low or high pressure, temperature or liquid levels.

THE MERCOID CORPORATION
4209 BELMONT AVENUE • CHICAGO 41, ILLINOIS
New York: 205 E. 42nd St. • Philadelphia: 3137 N. Broad St.

Heating Wholesalers hold annual Meeting in Chicago

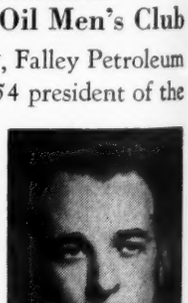
ABOUT 350 members and guests attended the annual convention of the National Heating Wholesalers Association, Chicago, held in the Conrad Hilton Hotel on December 8 and 9. Included on the program of the association's business meeting on December 8 was election of officers. William H. Bowe, Jr., Herrick Co., Boston, was named president; Gail C. Mason, Warm Air Supply Co., Dearborn, Mich. and Glenn Ashburn, Ashburn Supply Co., Culver City, Calif., became first and second vice-presidents, respectively. Stuart Rambo, Chicago, continues as executive secretary.

Three open meetings were held during the two days, with speakers discussing a variety of subjects of interest to the jobbers of warm air furnaces who belong to the association. Topics included: Credit and Collections by R. J. Woodward, Palmer-Donavin Mfg. Co.; Pension and retirement Insurance, by Glenn A. Ashburn; Prospects for Business, by Herman G. Seely, financial editor of the *Chicago Daily News;* A Heating Wholesaler looks at Cooling, by W. L. Dulle, E. E. Souther Iron Co.

Tuesday evening the group attended the annual banquet. The convention adjourned on December 9 after a morning session devoted to a discussion of Federal Trade Practice Rules.

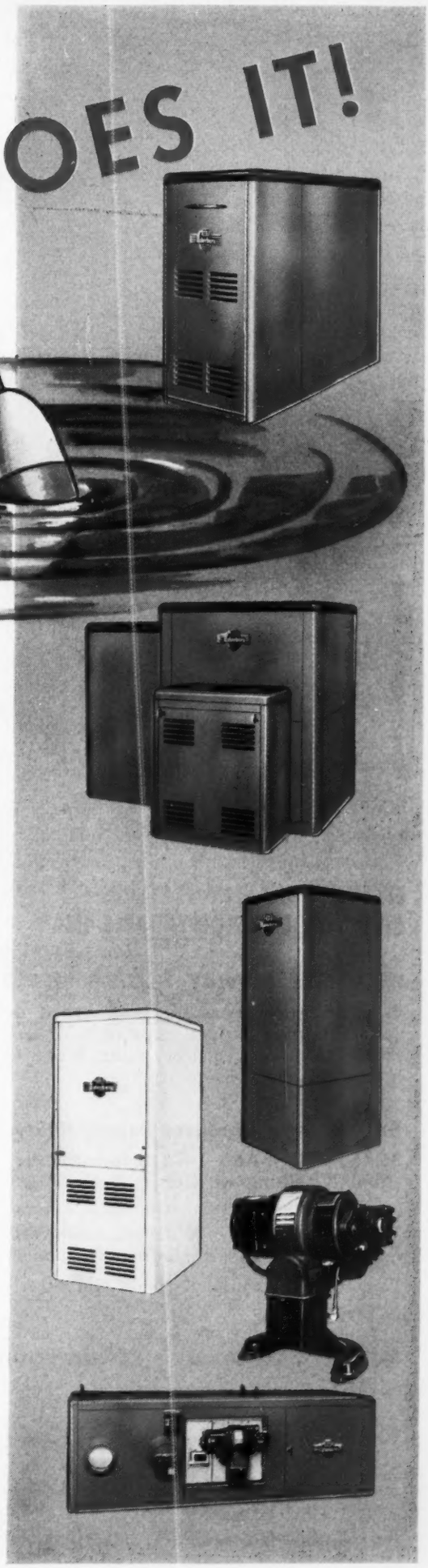
Ganley elected President of Chicago Oil Men's Club

WILLIAM H. GANLEY, Falley Petroleum Co., was elected 1954 president of the Chicago Oil Men's Club December 3. He is the club's 21st president. Other officers are: Roy J. Thompson, Apex Motor Fuel Co., vice-president; Ray C. Duffett, Globe Oil & Refining Co., vice-president; Bernard G. Ziv, Shell Oil Co., treasurer; Walter F. Vogt, Standard Oil Co. (Indiana), secretary.


Ganley

The new directors are: Gerald F. Tripp, Gustafson Oil Co., retiring

ONE LINE DOES IT!



and that line is...

Waterbury

OIL-FIRED FURNACES, AIR CONDITIONERS AND CONVERSION BURNERS

No matter what the heating job might be, there's a Waterbury unit made to order for it. A small house, a large one, the store on the corner or the church up the street . . . Waterbury heating has been designed to handle the job.

Every Waterbury dealer knows that the name Waterbury means customer acceptance . . . acceptance because quality engineering has given the Waterbury heating unit top dependability . . . acceptance because Waterbury has a reputation for economical operation . . . acceptance because Waterbury has the advantage of satisfied owners . . . owners who tell their friends.

All this means that when YOU represent Waterbury a large share of the selling is already done for you . . . and that, Mr. Dealer, means profits!

"IT'S WHAT'S UNDER THE CASING THAT COUNTS!"

The Waterman-Waterbury Co.

OVER 47 YEARS OF WARM AIR HEATING

1171 Jackson St. N. E. • Minneapolis 13, Minnesota

1953 president; Charles K. Haddon, Harry P. Dunn Co.; P. Roger Girard, P. R. Girard Co.; O. R. Waller, *Petroleum Marketer;* Henry G. Plane, Johnson Oil Refining Co.; J. N. Waddell, Henry H. Cross Co.; and Robert A. Zust, Cities Service Oil Co.

Now in its 30th year the club has more than 600 members from 24 states and from two Canadian provinces.

IOMA Board plans Agenda; Ellis to speak January 21

NATURAL GAS competition and prospective legislation on oil imports will be the giants to be slain by the Independent Oil Men's Association of New England in 1954.

The board of Directors met November 24 and planned next year's agenda. They ordered a comprehensive report on natural gas competition and activities to combat it in New England and renewed their opposition to restrictions on oil imports with a promise to cooperate with other groups interested in this issue.

They also discussed a Rhode Island legislative proposal which would make petroleum marketing subject to state regulation as a public utility.

The groups annual meeting will be January 21 at the Statler Hotel in Boston. The speaker will be Otis H. Ellis, general counsel of the National Oil Jobbers Council.

Wesley E. Downing is president of the group; Donal M. Sullivan is the executive secretary.

Union County OHI has John Sibarium as speaker

UNION COUNTY Oil-Heat Association had their December meeting at Mountainside, N. J., on December 10. John Sibarium, Boston Machine Works, was the speaker.

He discussed oil heat training and trouble shooting. A considerable time was devoted to a question and answer period. It was announced that the group would be eligible to attend the Middlesex County (N. J.) Fuel Oil Dealers service school, January 4, in New Brunswick.

Massachusetts OHI names January "New Member" Month

MASSACHUSETTS Oil Heat Association, Boston, Mass., has designated January as "New Member" month. Each member is being asked to bring at least one prospective member to the meeting.

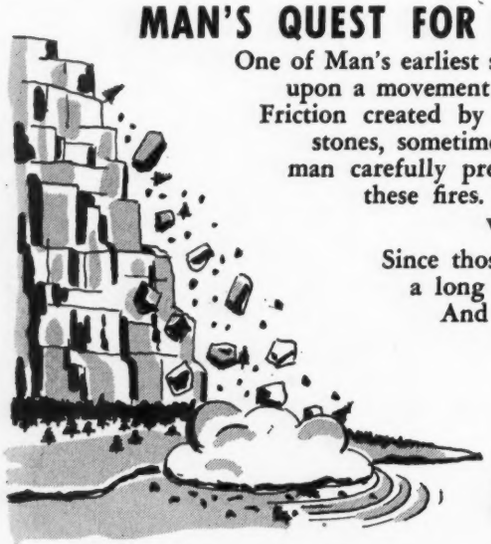
Robert Gray, editor of FUELOIL & OIL HEAT, will be the speaker when the group, meets January 21 in Boston, Mass.

Massachusetts OHI hears I. M. Nelson in Boston

I. M. NELSON, national field engineer of the Boston Machine Works, spoke at the December meeting of the Massachusetts Oil Heating Association in Boston. It was part of an over-all program to aid members beat competition. The speaker pointed out that a job done right eliminates expensive call backs and customer aggravation.

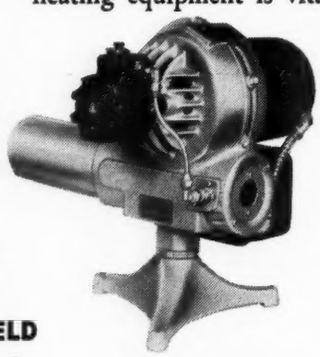
Service men were especially invited to the meeting because of their daily contact with customers and their ability to win or lose customers. Nelson pointed out that better installations mean more profits.

MAN'S QUEST FOR DEPENDABLE HEAT



One of Man's earliest sources of heat was *dependent* upon a movement of the earth — an avalanche! Friction created by the terrific speed of falling stones, sometimes produced grass fires. Early man carefully preserved burning embers from these fires. If his fire went out he was without warmth and comfort.

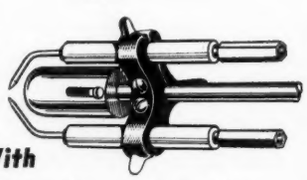
Since those early times, man has come a long way in insuring his comfort. And even today, *dependability* of heating equipment is vital.



EXCLUSIVE NU-WAY FEATURES GIVE YOU MORE DEPENDABLE HEAT

EXCLUSIVE NU-WAY NOZZLE SHIELD

Protects nozzle from heat and carbon deposits. Carbon on an unprotected nozzle reduces oil burner efficiency as much as 20% in one season.



Nu-Way Also Increases Dependability With

BRASS BUS BARS — To reduce chances of shorting and deterioration. No springs or wires.

TRANSFORMERS — With more turns of wire and more coil laminations to give positive ignition even under low voltage conditions.

Patented aluminum foil shield eliminates radio and television interference.

NU-WAY DEPENDABLE HEATING EQUIPMENT

Write Dept. FO-154 for details on the Nu-Way line.

THE NU-WAY CORPORATION

ROCK ISLAND, ILLINOIS

Sold through Jobbers and Distributors. Also Special Applications for Furnace and Boiler Manufacturers.

"Automatic Oil Heat Exclusively Since 1921"

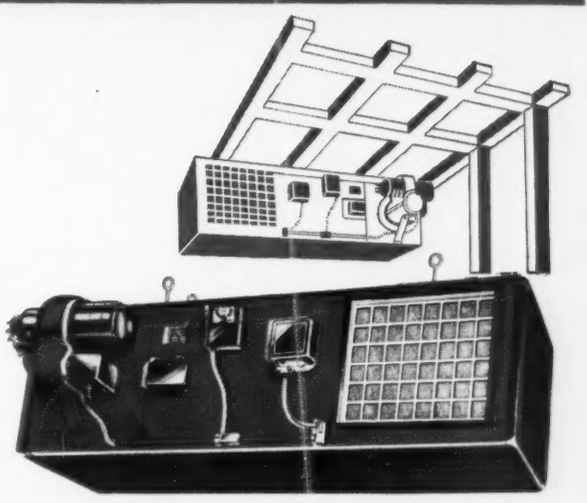
Nu-Way OIL HEATING EQUIPMENT

LOOK FOR THE FLAME

MORE BUSINESS
complete line

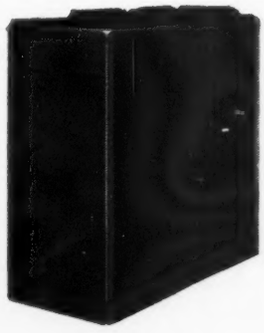
FOR SPACE SAVING COMPACTNESS—

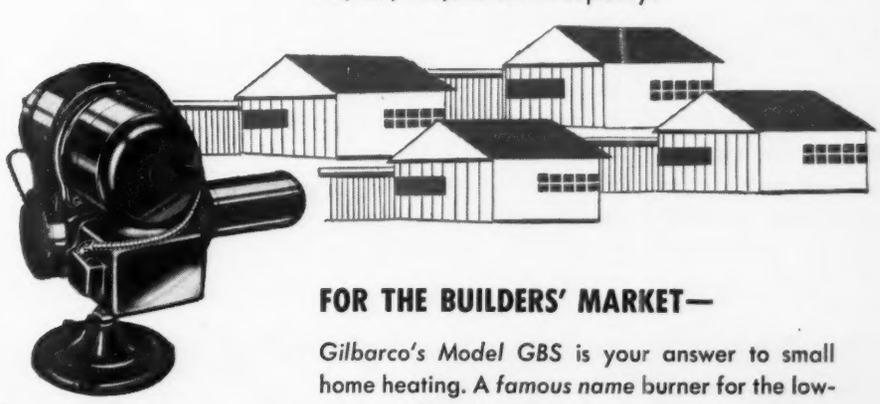
Gilbarco Vertical *"Space-Saver"* floor model; 85,000 B.T.U. capacity. Uses less than 3½ sq. ft. floor area.



FOR CEILING SUSPENSION HEATING—

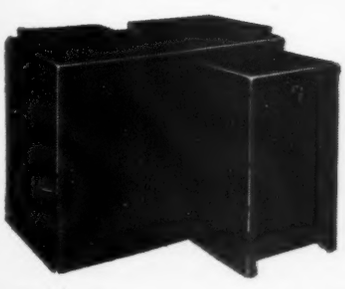
Gilbarco Suspended Furnaces are the answer for service stations, stores, garages, commercial buildings and multiple industrial installations. 115,000, 160,000, 200,000 B.T.U. capacity.





FOR THE BUILDERS' MARKET—

Gilbarco's Model GBS is your answer to small home heating. A *famous name* burner for the low-price market.



FOR ECONOMICAL HEATING—

Gilbarco compact *Warm Air Conditioners* are famous for easy installation and economical operation. GWA models are available in 115,000 and 135,000 B.T.U. capacities. GRF "Low-Boy" units come in 4 sizes up to 175,000 B.T.U. capacity.

Gilbarco

Gilbert & Barker Manufacturing Co.
West Springfield, Mass.
Toronto, Canada

fueloil & oilheat

Now! The Most Filter on the Market at a NEW LOW PRICE $3.95 each

MODEL MS-3 SETTE Microstone® Element FILTERS

● TOP QUALITY FEATURES... 100,000 BTU capacity. Maximum filtering efficiency...low flow resistance. Easily installed and cleaned on tank or line on all medium to large oil burning installations. Offers positive protection. Price includes built-in shut-off cock–drainage plug. *Sell–install–the* SETTE *Microstone Element Filter–Model MS-3.*

TAKE ADVANTAGE OF THIS NEW LOW PRICE. IF YOUR JOBBER CAN'T SUPPLY YOU, ORDER DIRECT.

Supplied postpaid anywhere in the U. S. A. Normal discount in dozen lots.
Valuable territories still available for distributors.

SETTE Features Make Sales Easier—Customer Satisfaction Greater!
The MICROSTONE ELEMENT stops all foreign matter down to 1/10,000 of an inch ...offers virtually no flow resistance...is easily cleaned and re-used. Entire filter can be disassembled and cleaned in 3 minutes or less. Yearly Element Change costs a few cents.

Model No. MS-3—List Price $3.95
Inlet and Outlet: ¼" IPT
Individually packaged
Packed: 24 to the carton

MARQUART MANUFACTURING COMPANY
1241 High St., Oakland, California • Export Div.: OCEANIC EXPORT CO., 400 Montgomery St., San Francisco 4

SETTE... a Size for Every Need

Letters

(*Begins on page 20*)

tory, and will be a credit to the industrial oilburner industry.

They say that confession is good for the soul. I do believe that this article should be studied, and possibly committed to memory by every executive in the industrial oilburning industry.

R. C. WESTOVER, JR.
President

Minneapolis 10, Minn.

Editor:

Thank you for the article "Some Folks like Gas" in the November issue.

Out here in the cheap gas area I have probably met more than my share of the defeatist attitude shown by too many fueloil dealers. The article certainly helped restore my perspective and I wish all fueloil dealers could read it—and act upon it.

TED CHADWICK

OPERATORS HEAT, INC.
Baltimore, Md.

Editor:

In October, tank car 1 and 2 oils were a cent apart but tank wagon was only ½¢. Going on this assumption that the No. 2 margin was correct I felt that the higher priced product where the stops are further apart should have at least the same.

So we raised our price ½¢ and found immediate support from dealers and now majors.

We found that the trade magazines giving quotations did not quote actual prices but theoretical prices of companies that posted prices but who had not delivered under their postings for years.

This seems to be a very bad practice to me.

J. HOLLIS B. ALBERT
President

Oregon Association names Dale Josephson Secretary

DALE JOSEPHSON has been named executive secretary, Oregon Heating Industries, Portland, Ore., succeeding "Bill" Alexander who resigned the post several months ago. Josephson had been assistant manager of the Chamber of Commerce, Vancouver, Wash. Several years ago in Portland he had been account executive for radio station KWJJ and was a partner in the McAnulty & Josephson Advertising Agency.

Charles R. Holloway, Jr., Liberty Fuel & Ice Co., Portland, and president of the association, announced the appointment. He explained that Josephson in effect will manage a statewide organization of oilheating dealers made up of 135 companies handling fuel and equipment.

ONLY McCORKLE CONTROLS for Vaporizing Oil Burners give you this combination of vital features

● Patented dual blade bi-metal assembly—insures trouble-free operation—supplies a wide margin of *extra* power.
● More rapid heat transmission.
● Snap acting Micro-switch.
● Heavier, more rugged construction.
● Less service—greater customer satisfaction.

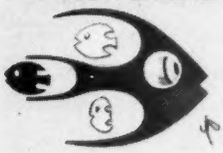
We will gladly furnish literature and specifications for your particular requirements. Write us today!

D. H. McCORKLE CO.
Box E, Station A Berkeley, California

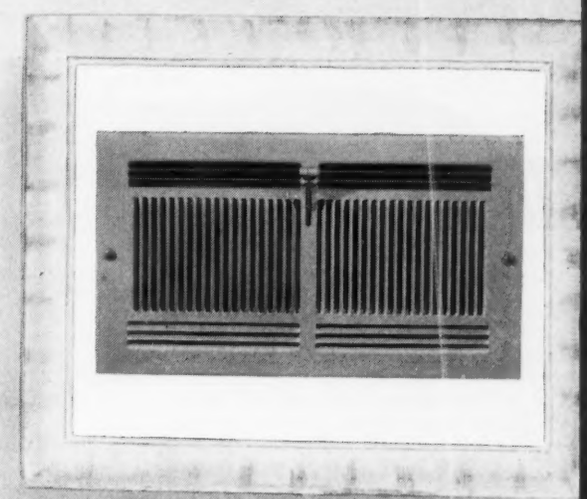
comfort in modern living

Barometers may rise and fall . . . but
indoor comfort will remain constant if you use

Standard's model 551 perimeter wall register



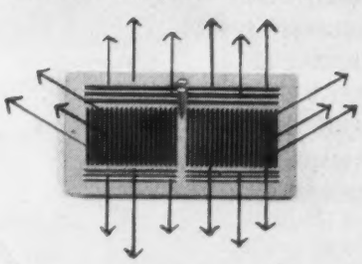
Standard's new perimeter Wall register gives 4 way diffusion along the outer cold walls for balanced warm air circulation. Standard's exclusive, new Fractionator Volume Control means one-time setting for positive air control. When you use Standard Perimeter Wall or Baseboard registers you are giving complete hemispheric heating and cooling comfort.



features.

- new fractionator volume control
- metallic finish
- standard screw holes
- single shutter control
- smart appearance
- for sidewall installation

4-way diffusion for balanced air circulation



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Standard Stamping & Perforating Company

3131 west 49th place
chicago 32, illinois

Group Activities (with gusto)

Edit. note: Perhaps this is a better way to write about association meetings, but once a year is probably enough. Anyway, this is how one of our boys brought in a report on two oilheating Christmas parties that he had been lucky enough to crash.

Wisconsin Oil-Heat Association

PROMPTLY AT 6 *p.m. on December 17, 1953 in a room known as "114 Club" in the Hotel Wisconsin in Milwaukee the vaunted competitive system of American business came to a dead halt. For at that hour and at that place 42 hale and hearty Milwaukee oilheating competitors laid aside their brass knuckles and raised their glasses to toast one another's health and happiness and the 1953 Christmas party of the Wisconsin Oil-Heat Association was under way.*

The entertainment committee made up of George (Jiggs) Ritonia, Chairman, C. Harry Adams, Richard Johnson, W. P. Liesen, Milton Roesler and Walter Bloedel did a fine job in arranging for the evening's festivities. Someone said that Harold Mottram, association secretary, helped, too.

There was quite a lot of liquid refreshments available for all and a very fine dinner was ultimately served. Then, there were refreshments, and then dessert and refreshments.

There were presents for everyone including the non-members (also non-paying guests). We separated ourselves from this happy and fun loving group leaving the roar of laughter and merry voices. According to Mottram, the outside temperature had just dropped below zero and the boys were especially happy because they were not going to have to drink fueloil the balance of winter.

Northwest Petroleum Association

EACH MONDAY *of the year is luncheon day for the Northwest Petroleum Association, but the Monday before Christmas week turned out to be something special, not only in regards to entertainment, but also in attendance.*

The luncheon was held in the club rooms of the association in the Radisson Hotel, Minneapolis, Minn.

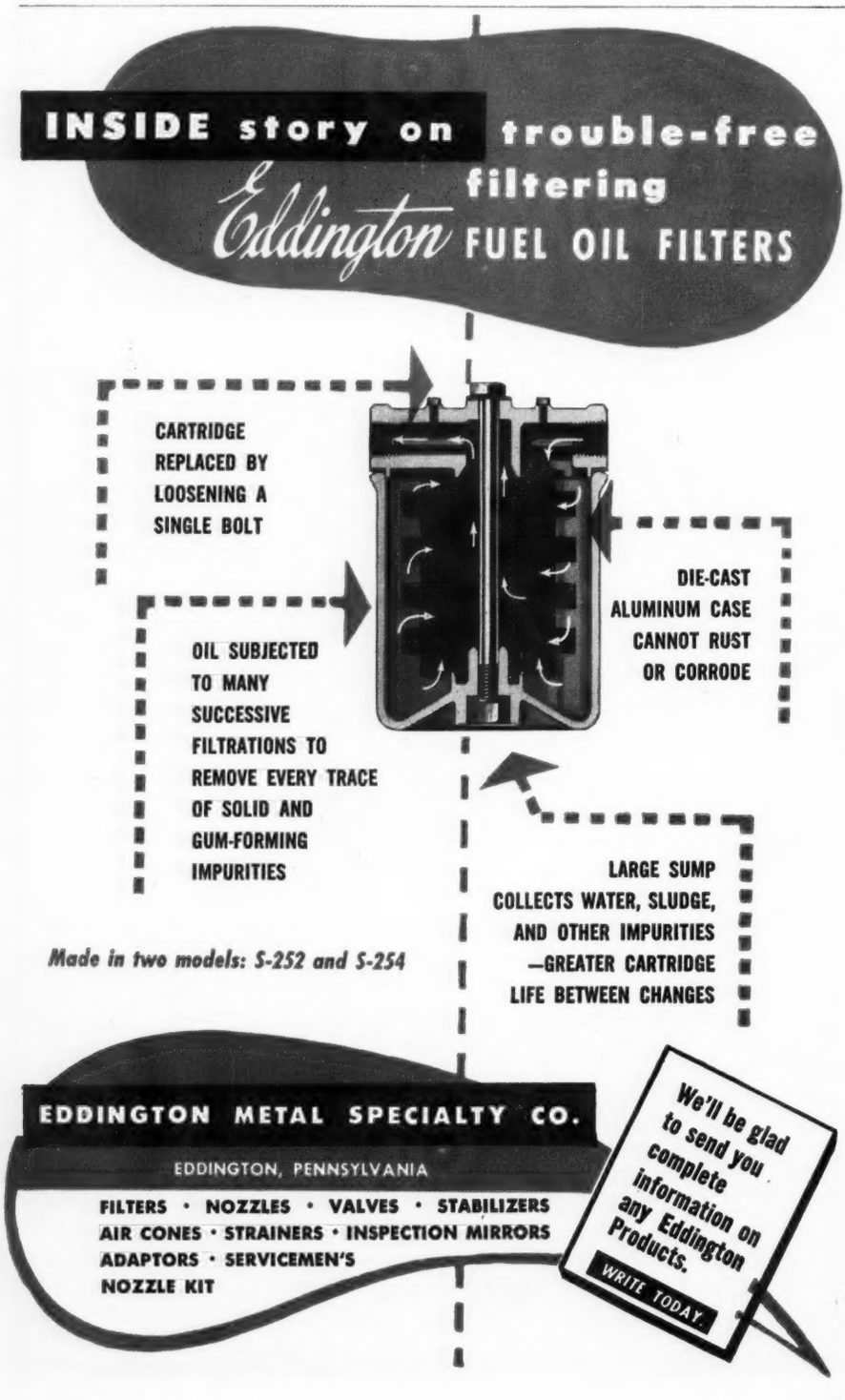
About 50 oilmen were present and with both bar and kitchen in full swing, all of the ingredients for fun were present. After lunch the members were entertained by a barber shop quartet.

The club rooms were decorated for the holiday season, and in one corner of the lounge was a beautifully decorated tree that was supposed to have been trimmed by the members themselves just the evening before. Hiff Horning, Association secretary, claims that nobody fell off the step ladder.

Mr. Horning commenting on the large turnout said that with Christmas 10 days away and many gay festivities coming up in the intervening period that it looked to him as if members had decided to tee off from home base.

❖

J. W. Calhoun represents the Aldrich Co., Wyoming, Ill., in Iowa, Nebraska, Kansas and Western Missouri.


INSIDE story on trouble-free filtering
Eddington FUEL OIL FILTERS
CARTRIDGE REPLACED BY LOOSENING A SINGLE BOLT
OIL SUBJECTED TO MANY SUCCESSIVE FILTRATIONS TO REMOVE EVERY TRACE OF SOLID AND GUM-FORMING IMPURITIES
DIE-CAST ALUMINUM CASE CANNOT RUST OR CORRODE
LARGE SUMP COLLECTS WATER, SLUDGE, AND OTHER IMPURITIES —GREATER CARTRIDGE LIFE BETWEEN CHANGES
Made in two models: S-252 and S-254
EDDINGTON METAL SPECIALTY CO.
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FILTERS • NOZZLES • VALVES • STABILIZERS
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We'll be glad to send you complete information on any Eddington Products.
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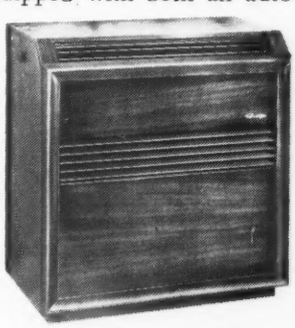
New Products

Each New Products item has an identifying number. If you want more information on any equipment described here write FUELOIL & OIL HEAT, *2 West 45th St., New York 36, N. Y. and identify the product in which you are interested by the number which appears at the end of each item.*

Remington introduces new Line of room Airconditioners

REMINGTON'S 1½ hp console type room airconditioner, illustrated, will be factory equipped with both an automatic thermostat control and electric heating. The line includes also a 1 hp unit, with the heating unit optional. The consoles are housed in cabinets offering a choice of traditional dark or blonde mahogany. Air-cooled models require no plumbing or drain connections; water-cooled units may be installed where an outside air source is not available. All are supplied for 115 and 230 volts DC, 208 or 230 volts AC, 50 or 60 cycles.



Newly-styled Remington window units feature a ½ hp deluxe unit with automatic temperature control, two-speed fans, optional heating and odor control. Also part of the window line are a 1/3 hp, ½ hp master, ¾ hp and 1 hp units.

Made by: Remington Corp., Air Conditioning Div., Auburn, N. Y.

Ask for more information about A1

Marietta adds Series of vertical fire-tube Boilers

FOUR MODELS make up a series of vertical fire-tube boilers added by Marietta Metal for hot water heating applications. Net load ratings are 450, 550, 610 and 735 sq. ft. of hot water radiation; each size is equipped with a domestic hot water heater with a capacity of 180 gph. The two smaller sizes have 14 boiler tubes, 2" dia.; the larger sizes are equipped with 16 and 20 boiler tubes, 2" dia.

Hot water heating boiler assembly consists of the boiler

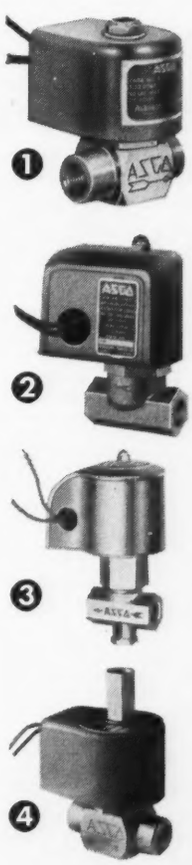
ASCO® BIG VALVE Values designed into SMALL Solenoid Valves

2-Way and 3-Way General Purpose Valves in the ⅛" to ½" Pipe Size Range

Design Features

* Capable of sustained fast repetitive operations over very long periods
* Snap action — opening and closing
* Full size orifices, assuring maximum unrestricted flow
* No closely fitted parts to make valve susceptible to jamming by small foreign particles
* Compactness — sizes to meet any restrictive space requirements

These small ASCO Solenoid Valves — examples of our design skills — may be just what you need for controlling automatically the flow of liquid or gas in your machine, instrument or pipe line. Complete details will be sent on request. If you have other control problems, why not let our engineers work on them? We have been serving industry in the field of electromagnetic controls for 65 years and can offer a great variety of Solenoid Valves covering many different services.



ASCO® General Purpose Packless Solenoid Valves for

Air, Gas, Water, Refrigerants, Light Oils, Heavy Oils and Other Non-Corrosive Fluids. 212°F. Maximum Temperature for Liquids and Gases; up to 450°F. for Steam (High Temperature Coils).

1. Bulletin 8262
   ASCO 2-Way Valve
   Pipe Size — ⅛" and ¼"
   Maximum Pressure 1000 psi
2. Bulletin 8265
   ASCO 2-Way Valve
   Pipe Size — ⅜"
   Maximum Pressure 250 psi
   (Steam to 175 psi)
3. Bulletin 8268
   ASCO 2-Way Valve
   Pipe Sizes — ⅜" and ½"
   Maximum Pressure 475 psi
4. Bulletin 8314
   ASCO 3-Way Valve
   Pipe Size — ⅛"
   Maximum Pressure 125 psi
   (Other Small 3-Way ASCO Valves to ½" pipe size available)

Write for free pamphlet "Small Solenoid Valves"

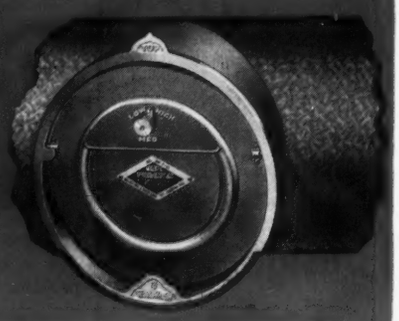
ASCO Solenoid VALVES

Automatic Switch Co.

385-F LAKESIDE AVENUE • ORANGE, NEW JERSEY

Only WALKER

Makes a Complete Range of Sizes of DRAFT REGULATORS



From Models for Trailers to Models for the Fairlington Project

WALKER FUEL-SAVER AUTOMATIC DRAFT REGULATOR

● Fairlington Project at Washington, D. C., the nation's largest housing project, saves fuel with Walker Ball Bearing Type Industrial Draft Regulators. This widely heralded application is only one of thousands throughout the range of heating applications. Twelve Million sales speak for themselves . . . and give proof of Walker design, craftsmanship, and engineering. You can be sure that there is a Walker Fuel-Saver for your application . . . and that it will provide fool-proof and long-lived "performance as perfect as possible."

SEND FOR CATALOG

Twenty pages show all types, sizes in full line. Applications and installations described. A valuable handbook FREE, if you write . . .

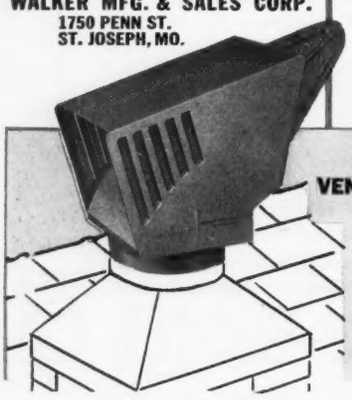
WALKER MFG. & SALES CORP.
1750 PENN ST.
ST. JOSEPH, MO.

Check These 9 POINTS

1. **EASE OF ADJUSTMENT** with exclusive patented pointer and calibrated dial.
2. **BOX TYPE HINGES** with sealed protection against corrosion, dirt and dust.
3. **BALANCE PLATE**—scientifically designed to maintain proper balance.
4. **SPECIFIC PIPE SIZES** — insure correct capacity for every type of installation.
5. **ALUMINUM FRAME**—rigid, long lasting.
6. **EASE OF INSTALLATION**—collar and stub for quick attachment.
7. **ARMCO ALUMINIZED STEEL**—for heat and corrosion resistance.
8. **FACTORY SET** — for "performance as perfect as possible."
9. **FREE FLOW** of air in unrestricted inside area.

EXCLUSIVE! PATENTED!

Pointer and Calibrated Dial assures quick and easy adjustment of premium quality Walker Fuel-Saver Automatic Draft Controls.



NEW WALKER VENTURI-TOP CHIMNEY CAP

is winning approval on more and more installations. Proved to be ideal in design and construction to correct insufficient draft and stop down draft . . . and to solve ventilating problems. Sizes from 3" to 8" ready for immediate delivery.

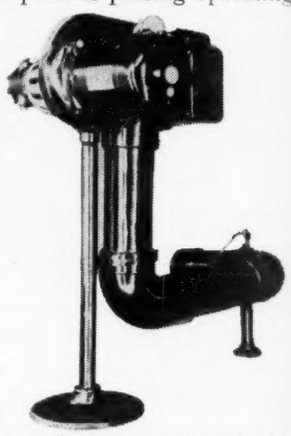
complete, flush casing and insulation, built-in insulating firebrick combustion chamber, tankless water heater and combination thermometer and altitude gauge. Boiler-burner unit consists of the boiler assembly, plus Magic-Heat oilburner, five controls, circulator, flow valve, oil filter and domestic hot water mixing valve. Oilfiring rates are 1.0 gph for the two smaller sizes, 1.20 and 1.35 gph for larger models.

Made by: Marietta Metal Products Corp., Marietta, Pa.

Ask for more information about A2

Extended draft Tube protects Oilburners from flood Damage

JOHN J. LINK has secured exclusive American patent rights for an extended draft tube that permits placing operating parts of domestic oilburners high enough above the basement floor to protect against water damage from floods or excessive rainfall. With the device it is possible to mount the burner directly in front of the boiler or furnace or it can be set off to one side as shown in the illustration.



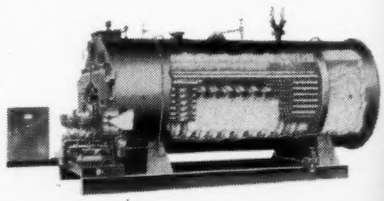
A larger fan is used to overcome added resistance in the extended blast tube and elbows. Any type gun burner can be equipped with the extension, which is effective from 3 to 10 ft. When water subsides or is pumped out it is necessary only to dry the electrodes and wires and clean the nozzle to put the burner back in service. The elbow on the draft tube has a removable section held in place by one wing nut to make it easy to remove the nozzle assembly.

Made by: John J. Link, Inc., 953 Post Road, Fairfield, Conn.

Ask for more information about A3

Kewanee and Petro combine to produce integrated boiler-burner Combination

KEWANEE-PETRO boiler-burner units are designed to be flexible in application. They include both steam and water models, in sizes from 39 to 456 hp for high pressure steam, from 1,313,000 to 15,300,000 Btu for 15 lbs. steam or 30 lbs. water. All are available for firing with No. 6 or lighter oil, gas or combination oil-gas.



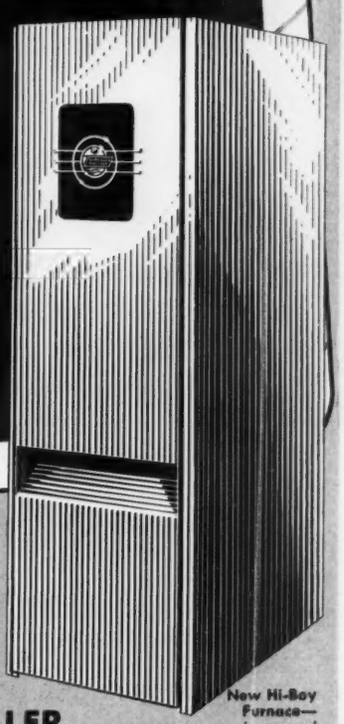
Engineered as boiler-burner combinations, boilers and burners are separately manufactured and shipped by the two companies. Boilers are Scotch type, pretested, equipped with accessories and mounted on steel skids. Burners include forced draft air supply and all combus-

When you sell CHRYSLER AIRTEMP
you've got something extra to sell with . . .

CHRYSLER AIRTEMP HEATING
+ CHRYSLER AIRTEMP AIR CONDITIONING
= DOUBLE PROFIT OPPORTUNITY FOR YOU!

Chrysler Airtemp Air Conditioners are designed for quick, easy installation in association with the all-new Chrysler Airtemp Furnaces. Properly matched, these Chrysler Airtemp units for summer cooling and winter heating form perfectly balanced combinations which give the home owner the very best in year 'round air conditioning. Install a Chrysler Airtemp Air Conditioner when you install a furnace, or at any later date, and you make a *double profit!*

More and more heating dealers are going into year 'round air conditioning—with Chrysler Airtemp. But this ready-made opportunity to realize a double profit is only one of the many extras you get—as a Chrysler Airtemp Dealer. Check the seven listed below. Then mail coupon for complete facts and figures on the franchise which can offer you the greatest selling help in 1954.



New Hi-Boy Furnace—in gas and oil-fired models

New Lo-Boy Furnace—in gas and oil-fired models

1-2-3-4-5-6-7 additional extras you sell with —as a CHRYSLER AIRTEMP DEALER

Consumer Confidence—People know the Chrysler Airtemp name—associate it with engineering leadership—have complete confidence in the products which carry it.

Product Leadership—All-new Chrysler Airtemp Furnaces give you exclusive features that you can demonstrate to your prospects in terms of more efficient, more economical automatic heating.

Faster, Easier Installation—Amazing compactness of design, complete factory assembly and front location of flue outlet combine to permit faster and easier installation. You save valuable man-hours.

8-Year Warranty on new, super-efficient, corrugated-design heat exchanger gives your customers additional confidence in their choice of Chrysler Airtemp.

Smarter Modern Styling—All-new Chrysler Airtemp models feature new smarter modern styling—with plenty of eye appeal for homeowners.

More National Advertising to consumers and builders in leading publications is steadily pre-selling prospects on Chrysler Airtemp Heating and Air Conditioning, including many of the best prospects in your own trading area.

More Local Selling Helps—Chrysler Airtemp gives you a broad choice of tested and proved selling helps designed to work for you in your own market over your own name. New 20-minute full-color movie makes a terrific impression on every viewer!

CHRYSLER AIRTEMP

HEATING • AIR CONDITIONING
for homes, business, industry
Airtemp Division, Chrysler Corporation, Dayton 1, Ohio

F&OH-1-54

Airtemp Division, Chrysler Corporation
P.O. Box 1037, Dayton 1, Ohio

Please send us complete details concerning the Chrysler Airtemp Franchise.

Guaranteed by Good Housekeeping

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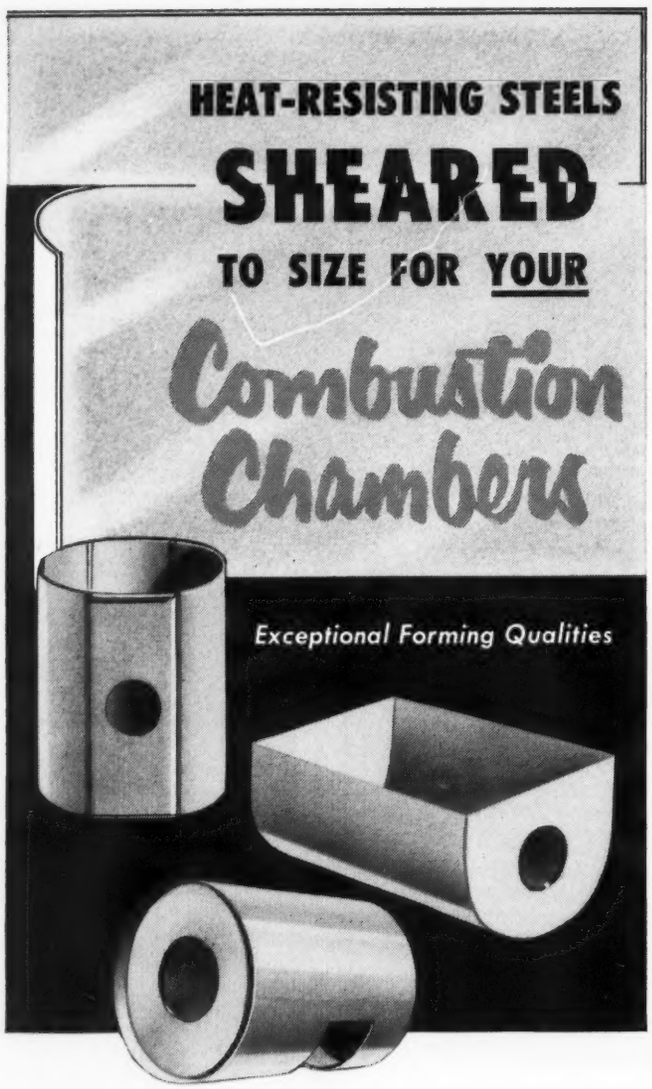


Ingersoll *specializes* in producing heat-resisting stainless steels—of *exceptional forming qualities*—specifically for oil burner combustion chambers.

Whether you use these steels in large or small quantities, Ingersoll facilities offer exceptional service by custom shearing to your own specified combustion chamber blanks, or multiples thereof.

Advantages

OF HEAT-RESISTING STEEL CHAMBERS

- **No breakage in shipment or handling**
- **Lighter weight lowers freight costs**
- **Quicker heating—greater efficiency**

ENGINEERING B-W PRODUCTION

Write, wire or phone for details

Ingersoll STEEL DIVISION

Borg-Warner Corporation

310 S. Michigan Ave., Chicago 4, Illinois

Plant: New Castle, Indiana

tion controls, mounted and prewired in a central control cabinet.

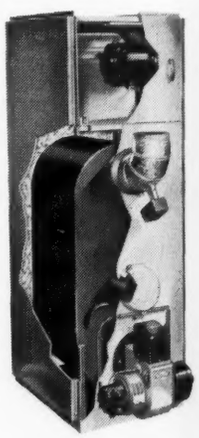
Matching connections facilitate attachment of burner to the boiler. Refractories are integrally mounted at the factory, cutting time and labor required.

Made by: Kewanee-Ross Corp., Kewanee, Ill., and Petro, Cleveland 11, Ohio.

Ask for more information about A4

Williamson oilfired counterflow Unit designed for quick, easy Installation

THE OILFIRED counterflow furnace added to the Williamson line has been designed for simplified, speedy installation. Shipped in three packages, the pre-assembled and pre-wired unit is fired with a pressure atomizing burner, flange-mounted, and features complete servicing from the front. Heat exchanger is hot rolled steel with 100% primary radiating surface.



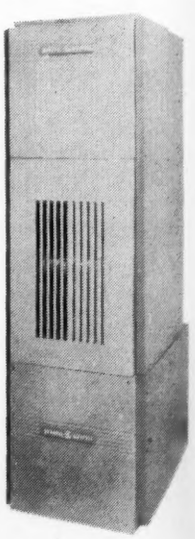
Three models of counterflow units are available, 100,000, 119,000 and 145,000 Btu/hr capacities. Standard equipment on all includes blower and motor, variable speed pulley, filter, barometric draft regulator, burner, thermostat and other controls.

Made by: Williamson Heater Co., 3500 Madison Road, Cincinnati 9, Ohio.

Ask for more information about A5

G-E's Line includes air-cooled cooling Units, economy oil Boilers

INTRODUCTION of G-E's 1954 line of cooling and heating equipment reveals that each water-cooled home cooling unit will have an air-cooled counterpart. Also space-saving downflow and horizontal models for basementless homes were announced. Addition of a 1½ ton unit for smaller homes and improved upflow models complete the cooling line.



The downflow unit (illustrated) provides year-round airconditioning and requires no more floor space than used for heating alone. The downflow cooling unit is intended for homes on slab foundations. Air enters the top of the unit, is filtered and cooled and leaves at the bottom through ducts imbedded in the slab. Available in four sizes: 1½, 2, 2½, and 3 tons, housed in a compact steel package, 24″ high, 36″ deep, widths varying from 25″ to 29″.

Complete upflow line of cooling units consists of the same four sizes listed above, plus a 5-ton size. Upflow units are completely self-contained packages, measuring 55″ tall and 30″ deep, widths varying from 21″ to 25″.

you need a good strong line of equipment to land 'em *that's why*

Petro OIL BURNERS

PROSPECTS? . . . there's a lot of good oil burner prospects around . . . but nowadays, *they have to be sold.* That's where the long, strong Petro line comes in. With Petro oil burners you can take care of little houses, average homes, or huge mansions—small stores, apartments or office buildings, and any industrial need. Regardless of the job, you have just the right burner.

And what selling features you have! Features like the 51-year reputation of Petro dependability . . . the fuel-saving operation of every Petro unit . . . the compactness and attractiveness . . . and the ability to follow fluctuating load demands, and the dependable, trouble-free service. Add to all these the ease of installation and you can see why Petro equipment is easier and more profitable to sell. Write Petro, 3060 West 106th Street, Cleveland, Ohio. (In Canada: 2231 Bloor Street West, Toronto, Ontario) for full information and illustrated literature.

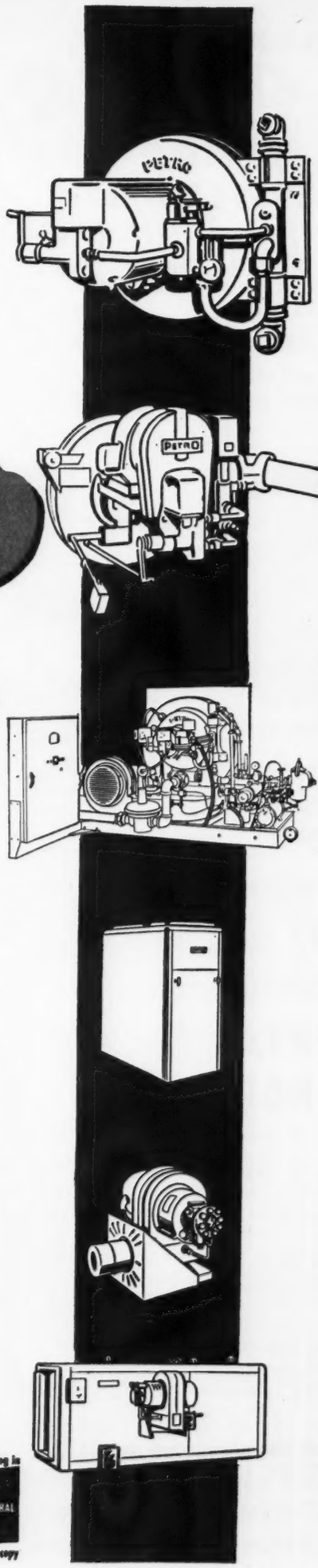
Residential Oil Burners, Oil and Gas Furnaces and Boilers, Industrial and Commercial Oil, Gas and Oil-Gas Combination Burners

PETRO

T.M. REG. U.S. PAT. OFF.

51 YEARS OF LEADERSHIP IN AUTOMATIC HEATING AND POWER EQUIPMENT

see our catalog in SWEET'S ARCHITECTURAL FILE or write for copy



Industrial Oil Burners
Rotary type. Burn low-cost heavy fuel oil with complete reliability. Oil and oil-gas models for every industrial need. Capacities up to 200 gallons per hour.

Combination Oil-Gas Burners
This commercial industrial burner is the answer to seasonal fuel shortages. Makes possible advantages in economical fuel buying.

Complete Packaged Unit
A complete combustion system in which all elements are completely balanced and integrated. Saves installation time and cost.

Residential Furnaces and Boilers
Real fuel savers. Made in popular sizes to fit the heating needs of homes of from 4 to 10 rooms.

Conversion Units
Efficient, trouble-free oil burners for home and commercial use. Capacities up to 20 gallons per hour.

Horizontal Furnace
Hang it or hide it—this winter air conditioner fits anywhere. Available in 5 models from 80,000 to 180,000 Btu's (output at bonnet).

fuel oil & oil heat

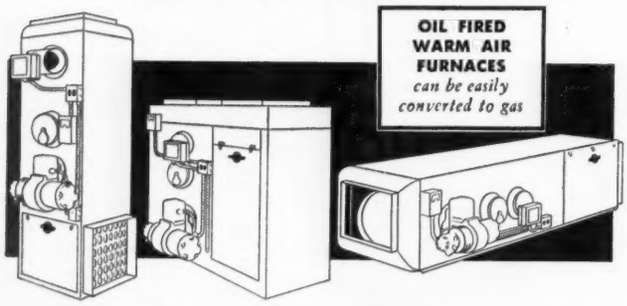
YOU ALSO GET THE

BIG SIZES

in the BESSER line!

A COMPLETE RANGE OF SIZES . . .
from 75,000 BTU to 500,000 BTU

A COMPLETE LINE OF MODELS . . .
Horizontal • Vertical • Basement
Downflo • HiBoy • LoBoy • Suspended



Plus **SPECIAL ORDER SERVICE**
on any size unit **UP TO 1,000,000 BTU**

For jobs that require units larger than 500,000 B.T.U., Besser offers fast, reliable Special Order Service. We have the facilities to build any type unit required, up to 1,000,000 B.T.U. output. Every "special order" is built to the same high standards of the regular Besser line. Whatever your need, we can build it!

And now! **A NEW PROFIT-MAKER JOINS THE BESSER LINE**

Revolutionary

HORIZONTAL Summer AIR CONDITIONERS

for Residential or Commercial installations

Combining space-saving "horizontal" design with an entirely new cooling principle, Besser Summer Air Conditioners bring central air conditioning within the reach of almost everyone. Designed for installation and operation in conjunction with central heating systems, units are fully adaptable to either warm air or hot water heating. Greatly increased efficiency lowers initial and operating costs through use of smaller units.

Available in 2, 3 and 5-Ton units.

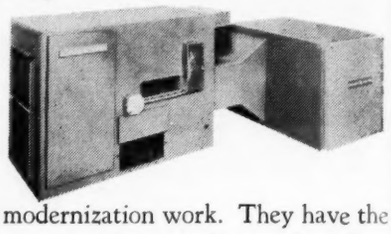
"Only the BEST goes into a BESSER!"

BESSER WARM AIR FURNACES
Summer AIR CONDITIONERS

The Complete Line for Year-Round Profits

BESSER METAL PRODUCTS CORP., P. O. BOX 4064, CHARLOTTE, N. C.

They are designed to integrate with upflow furnaces for year-round airconditioning.



Horizontal cooling units are designed for homes with crawl space or large attics and are recommended also for modernization work. They have the same dimensions and come in the same sizes as downflow models.

The addition of a line of air-cooled units increases the flexibility of the line. They are intended for use where water is costly or supply is restricted.

Added to the heating line are "economy" boilers with rated outputs of 100,000 and 140,000 Btu/hr. These small-sized oilfired units are adaptable for the mass produced small and medium size house where hot water heat is desired. They include an instantaneous water heater.

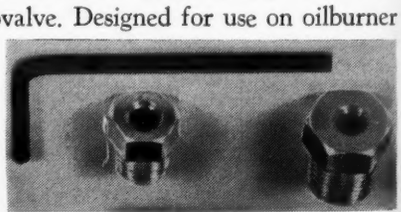
A horizontal oilfired furnace unit is a completely packaged unit compact enough to pass through a 28" door. It may be suspended or installed where space is at a premium and is offered in sizes with rated outputs of 60,000 and 85,000 Btu/hr.

Made by: General Electric Co., 5 Lawrence St., Bloomfield, N. J.

Ask for more information about A6

Hydrovalve announces two Sizes of bleeder Valves for burner fuel Units

IMPROVED bleeder valves in sizes of 1/8" and 1/4" have been announced by Hydrovalve. Designed for use on oilburner fuel units, the valves work also with low pressure hydraulic equipment.



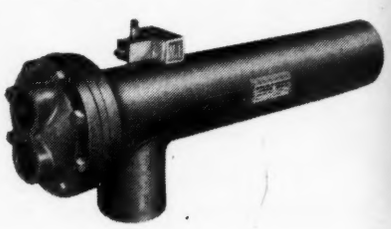
They feature Dryseal pipe threads, alloy socket screws and an undercut internal thread to permit the valve to be opened and closed many times without leaking. Hydrovalve bleeder valves are available as standard equipment on a number of fuel units and oilburners.

Made by: The Hydrovalve Co., 1319 Utica Ave., Brooklyn 3, N. Y.

Ask for more information about A7

M & L Guardian fueloil Heater detects Oil in boiler Water

AS A PROTECTION against contamination of boiler water in below-the-water-line installations, the M & L Guardian fueloil preheater is equipped with a Guard-a-Probe electric element that detects oil in boiler water and a Guard-a-Trol



These sales-proved A-P accessories add

MORE PROFITS

to your oil heater sales

EVERY oil-burning heating appliance customer is a prospect for these high-profit A-P accessories. Automatic heating, automatic oil lifting and clean fuel oil in the burner . . . they're all advantages that mean extra sales, extra profits for you. So, join the thousands of satisfied dealers all over the country who are cashing in on this profit-packed line. Stock A-P, display A-P and you'll profit with A-P. Write today to — A-P CONTROLS CORPORATION, 2458 N. 32nd St., Milwaukee 45, Wis.

Sell automatic heating

This Thermomatic Comfort Control provides automatic heating with no wiring — no electrical connections. Fits on manual control nameplate. Low in cost . . . no installation . . . no service.

Exclusive actuating pin on A-P manual oil controls permits quick attachment of all A-P conversion tops for automatic heat control.

Electric Conversion Kit provides regular room thermostat heat control for vaporizing oil-burner, space heaters and furnaces. Any owner can install. Comes complete with transformer, wire and insulated staples.

Electric Conversion Kit provides simple room thermostat heat control for fan-type heaters. For use either with draft fan or circulating blower on heaters and furnaces. For "on-off" or "high-low" fan speed control.

Sell automatic oil lifting

Cash in on clean, easy fuel oil handling with an A-P Oilifter. Draws oil from tank or drum located outside or in basement. Delivers it to the third floor, if necessary.

Sell increased efficiency

Cash in on freedom from danger of burner failure due to dirt, moisture or impurities in oil . . . with an A-P Fuel-Oil Trap-It. Eliminates costly service calls by preventing sluggish operation or flame failure due to erratic flow.

A-P CONTROLS CORPORATION

DEPENDABLE *Controls*

For Air • Gases • Refrigerants

In Canada: A-P Controls Corp., Ltd. Cooksville, Ontario

For Export: 13 E. Fortieth St., New York 16, N. Y., U.S.A.

3 ways to MODERNIZE oil burner installations

install VENTALARM®
Whistling Tank Fill Signal

Here's the way to provide for modern, automatic oil delivery. Guarantees accurate, no-spill fills day or night, whether customer is at home or away.

"Just Fill While the Whistle Blows"

A variety of models for new and old tanks.

install SCULLY® GAUGE
Underwriters' Approved

A modern convenience in every way. Big figures readable at first glance. Face adjustable to any angle. Built for accurate, service-free operation. Specify tank depth when ordering.

"BUTTON-LIFT" INSTALLATION
Lifting the button indicator draws cork arm up close to main shaft for easy installation even in partly filled tanks.

or install this combination . . .
VENTALARM® GAUGE
Underwriters' Approved

The famous whistling fill signal and easy reading gauge in one modern unit. Goes on tank as integral part of vent pipe.

Specify tank depth and opening when ordering.

One item to install instead of three . . . with button-lift convenience described above.

Scully Products are manufactured under U.S. and foreign patents or patents pending.

See your regular Supply House.

SCULLY SIGNAL COMPANY
174 Green St.. Melrose 76, Mass.

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control box that sounds an alarm in case of accidental leakage of fueloil. Both 2-pass and 6-pass models are offered with capacities ranging from 19 to 680 gph, based on 180° and 212° boiler water temperatures.

Heaters are made with admiralty or copper-nickel tubing for maximum corrosion resistance. Design features include non-ferrous probe body; horizontal probe element for sensitivity; factory pre-set electric equipment; no necessity for field adjustments, rheostats, resistors or other controls; rugged construction and easy installation.

Made by: Manning & Lewis Eng. Co., 28-42 Ogden St., Newark 4, N. J.

Ask for more information about A8

Motor Mount combined with Guard on some Wing Utility unit Heaters

SOME MODELS of Wing Utility unit heaters are being produced with a new type of construction. Certain sizes of the Utility types, horizontal discharge heaters, as well as some of the suspended, vertical discharge revolving unit heaters, are affected.

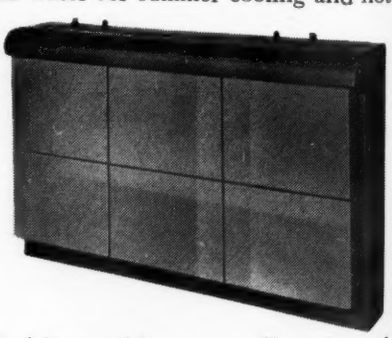
The feature of the construction lies in combining the motor mount with an integral safety guard, resulting in a more rigid type of motor mounting and more strength in the safety guard.

Made by: L. J. Wing Mfg. Co., Linden, N. J.

Ask for more information about A9

Brown summer-winter Unit cools with chilled Water

THE BROWN airconditioner is a combination summer-winter unit which utilizes cold water for summer cooling and hot water for winter heating. It is installed in a room like a conventional convector and has an adjustable grille. At present three sizes are available: 5/8, 1 and 1½ tons. The units, which deliver cold or warm filter-cleaned air, require only piping and electrical connections for installation.

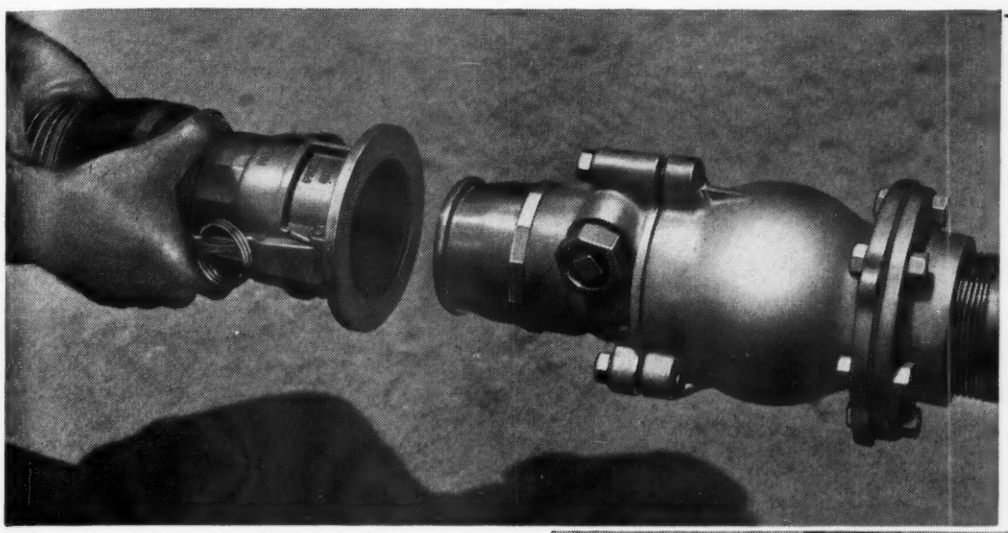


A specially designed water chiller, available with air-cooled condenser where use of water is limited, is furnished. It is completely factory-assembled and is available in a 2 ton and 3 ton model. For basement installations the chiller is equipped with a condensate booster for collecting condensate from the room units for additional evaporative cooling.

Made by: Brown Products Co., Forest Hills, N. Y.

Ask for more information about A10

New, quick-connecting leakproof hose coupler

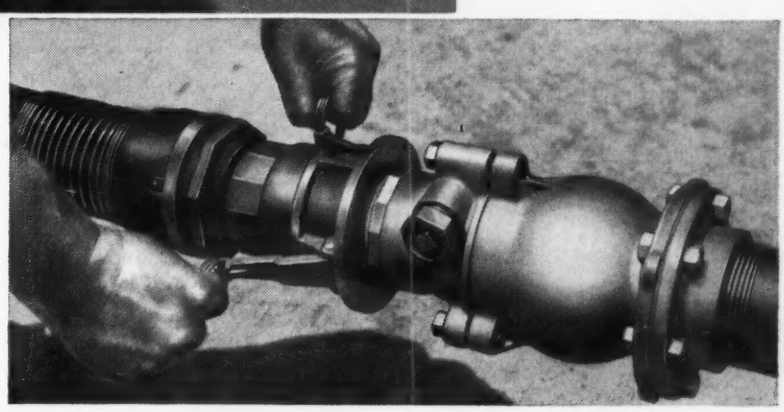


← This new coupler snaps into place, seats and seals itself instantly without use of cams or levers. No chance of any leakage.

•

Coupler unfastens with outward pull on the arms. No spanner or wrench required.

↓



LOCKS AND SEALS *AUTOMATICALLY*

With this new design, the operator simply pushes the connector over the adapter. Two latches lock the unit together *automatically*—no threading or tightening necessary.

When the unit is locked, a patented self-tightening seal makes a leaktight connection at low or high pressure. The mechanism is designed so that it automatically compensates for any wear in the gasket or metal parts. The coupler is free to swivel before pressure is applied, preventing hose kinks.

All parts are made of bronze and stainless steel to prevent rust or corrosion. Couplers can be furnished in aluminum if required. Elbow style in 2½″ and 3″ pipe sizes; straight style in 2″, 2½″, 3″ and 4″ pipe sizes. Adapters are available for all pipes and faucets.

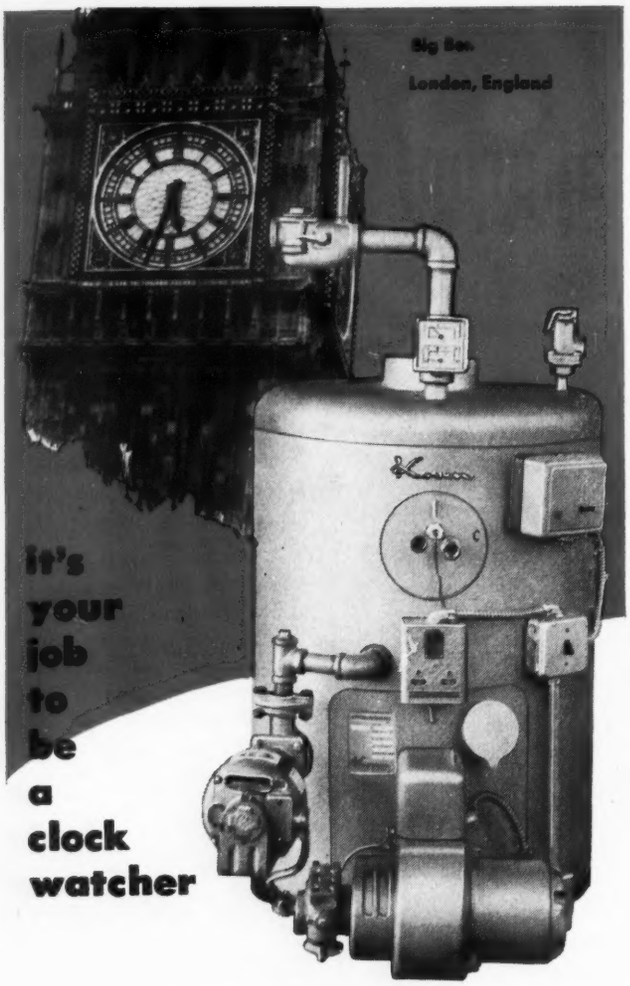
Write us before you have truck tanks built or refitted. We'll send you the complete details on these remarkably advanced couplers and on our full line of truck tank fittings and petroleum handling equipment.

PHILADELPHIA VALVE COMPANY

3413 ARAMINGO AVENUE • PHILADELPHIA 34, PA.

Pacific Coast Distributors:

Oil Marketing Equipment Co., 325 Fremont Street, San Francisco 5, Calif.
Howard Supply Company, 5125 Santa Fe Avenue, Los Angeles 11, Calif.



FAST INSTALLATION MEANS

MORE INSTALLATIONS

with a **venko**

BY **Koven** PACKAGED UNIT

gas or oil fired

- PLENTY OF HEAT AND HOT WATER
- FUEL SAVER—economical to operate
- FULLY WIRED AND ASSEMBLED as illustrated
- QUICKER SALES—QUICKER PROFITS
- FITS THROUGH A 30-INCH DOOR in easy one-man handling crate
- BUILT TO FIT THE MODERN HOME—compact, rugged construction saves space

Built to fit the modern home

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a division of L. O. KOVEN & BRO., INC.
154 OGDEN AVENUE, JERSEY CITY 7, N. J.
Plants: Jersey City, N.J. • Dover, N.J. • Trenton, N.J.

Message Repeater delivers tape-recorded sales Talk

MESSAGE REPEATER is a compact unit containing a recording and play-back device, designed to deliver automatically a sales talk when a car or person passes or stops in front of the machine. It works with electric eyes, manual or automatic switches or time switches through a full two minute cycle, although it can be set for shorter intervals.

Recommended for giving voice to animated displays or attracting attention to exhibit booths, the message can be changed by talking into the tape recorder. The old message is automatically erased as the new one is recorded. Entire unit weighs 6 lbs., measures 6½" x 5¾" x 5½". Recording medium is a self-contained cartridge of tape.

Made by: Michigan Electronics, Inc., 854 No. Rockwell St., Chicago 22, Ill.

Ask for more information about A11

LOVEJOY Type DX Double Flex
FLEXIBLE COUPLINGS

Build smooth, quiet operation, efficient performance, and enduring service life into your fans and pumps with LOVEJOY Flexible Couplings. Quickly installed. Easily serviced. Ideal for close-quarter applications. Special rubber center increases flexibility . . . dampens out noise and vibration. Most manufacturers supply fans with Lovejoy jaws on fan hubs at no extra cost.

OIII

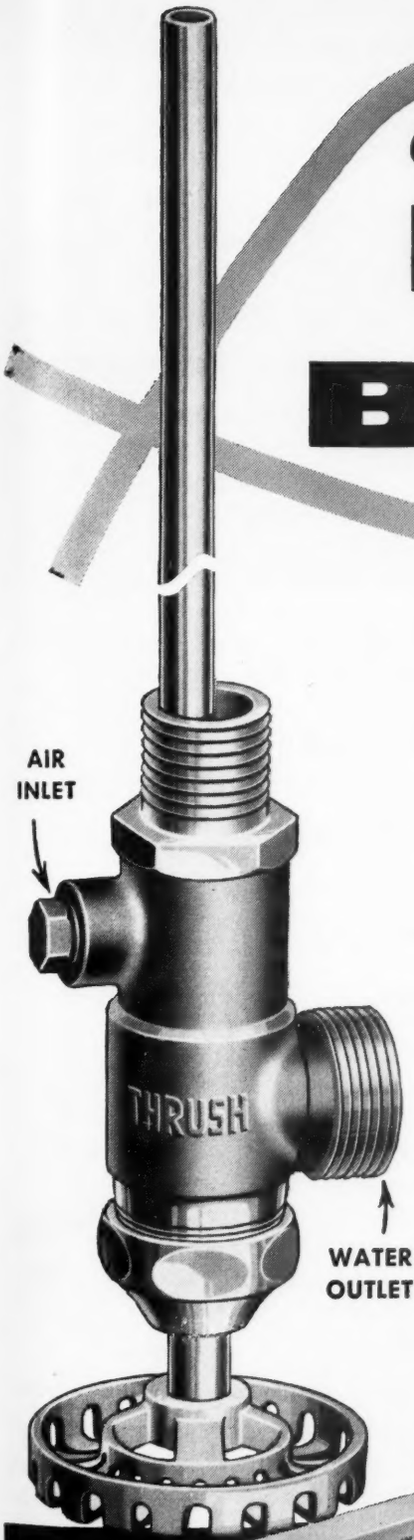
- *Investigate today. Send for literature on complete line of Lovejoy Double Flex Flexible Couplings.*

Also Mfrs. of Lovejoy Universal Joints and Lovejoy Variable Speed Transmissions.

LOVEJOY FLEXIBLE COUPLING CO.

4812 W. LAKE ST. • CHICAGO 44, ILL.

a real... PROFIT BUILDER



You can sell a THRUSH Tank Drain for every expansion tank on any existing installation

YOU CAN SAVE your customer money, save yourself time and bother . . . and make a profit, too, by selling and installing Thrush Tank Drain. This simple, inexpensive Tank Drain combines an air tube with a drain and fits any drain tapping. Two lengths of tube are available.

REDUCES DRAINING TIME!

Draining waterlogged expansion tanks is simple, quick and positive with a Thrush Tank Drain. While all genuine Thrush Pressure Tanks now have Thrush Vacuum Breaker, there are many old installations where the tank has only one drain tapping. Sell them a Thrush Tank Drain. Just screw it into the drain tapping. Then remove the air inlet plug to break the vacuum and open the water outlet. The tank will drain quickly and completely. It's a profit item you can sell every day. For more information see your wholesaler or use the coupon below.

H. A. THRUSH & COMPANY

NEATLY BOXED

MAIL NOW!

H. A. THRUSH & COMPANY, Dept. C-1, PERU, INDIANA

Please send, without obligation, more information on the Thrush Tank Drain.

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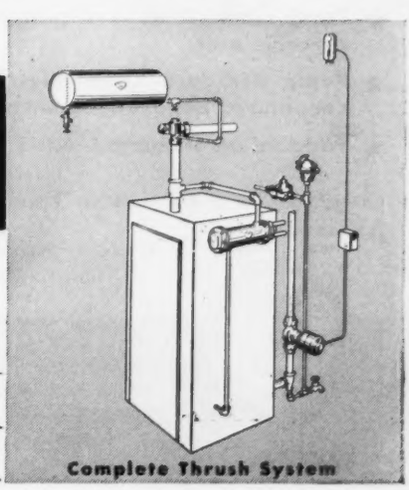
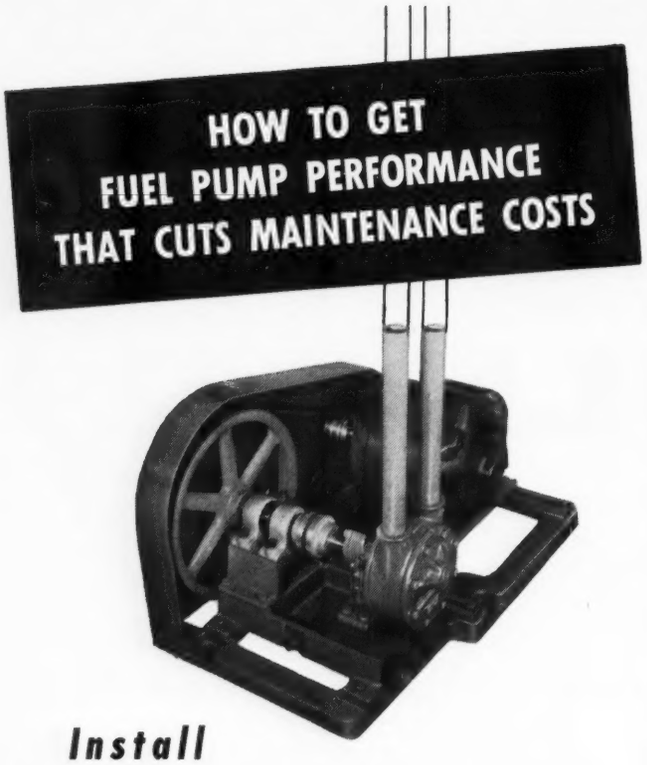


Complete Thrush System



Install

TUTHILL TYPE SU *Pumping Units*
For Dependable Service
in Industrial Heating

Tuthill Type SU multiple V-belt pumping units provide structural and performance advantages for dependable, uninterrupted operation that add up to reduced maintenance expense.

Features like these make the SU outstanding for handling heavy fuel oils in industrial heating:

- ★ **Motors up to 5 h.p. mounted on slotted slide rails for easy adjustment or replacement. No drilling or tapping required.**
- ★ **Cast iron base with mounting bolts and adjustments easily accessible.**
- ★ **One-point belt-tension adjustment.**
- ★ **Jack shaft, supported by ball-bearing pillow blocks, carries entire weight of pulley and absorbs belt tension.**
- ★ **Pump, jack shaft and pillow blocks available as separate unit.**
- ★ **Pump and jack shaft direct-connected by flexible coupling for better alignment and simplified mounting.**
- ★ **Wide range of pump models and capacities.**

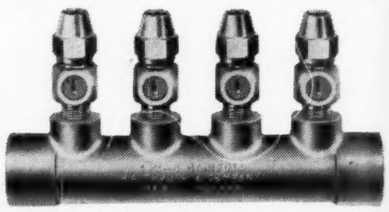
Complete data is presented in Tuthill Catalog No. 107. Write for your copy today.

TUTHILL — PUMPS FOR THE PURPOSE

TUTHILL PUMP COMPANY
Dependable Pumps since 1927
939 East 95th St., Chicago 19, Illinois
Canadian Affiliate: Ingersoll Machine & Tool Co., Ltd.
Ingersoll, Ontario, Canada

Thrush Manifolds and balancing Valves for radiant hot water heating Systems

ADDED to the Thrush line for radiant hot water heating systems are manifolds and balancing valves. The manifolds, without balancing valves, serve as supply manifolds and save fittings, reduce the number of solder connections and simplify installation. At the return connection a Thrush manifold with balancing valves is used, illustrated.



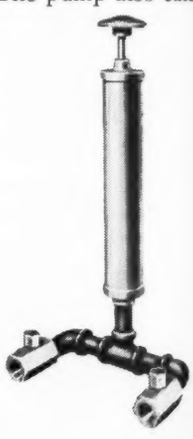
Manifolds are available in 1", 1¼" main size with 2, 3 and 4 branch outlets for ⅜" or ½" coils. Where more than four branches are needed manifolds are installed in multiples. Descriptive folder, MBV-1053, covers both manifolds and balancing valves.

Made by: H. A. Thrush & Co., Peru, Ind.

Ask for more information about A12

Hold-Tite hand Pump useful for blowing out oil Lines and Priming

A HAND PUMP has been introduced by Hold-Tite designed to blow or suck out sludge in oil lines. The pump also can be used for priming and testing lines and can handle air and most liquids with ease.



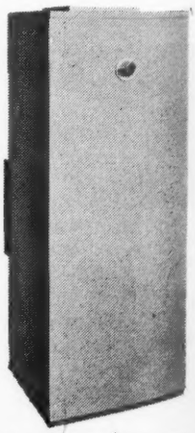
The pump features suction and pressure side terminating in two absolutely tight Hold-Tite Oil-Chek valves; piston is made of solid brass with neoprene ring. The 8" barrel is made of heavy gauge all-brass. Available with or without check valves.

Made by: Hold-Tite Valve Co., 550 5th Ave., New York 36, N. Y.

Ask for more information about A13

Mor-Sun Airconditioners designed to complement Mor-Sun furnace Line

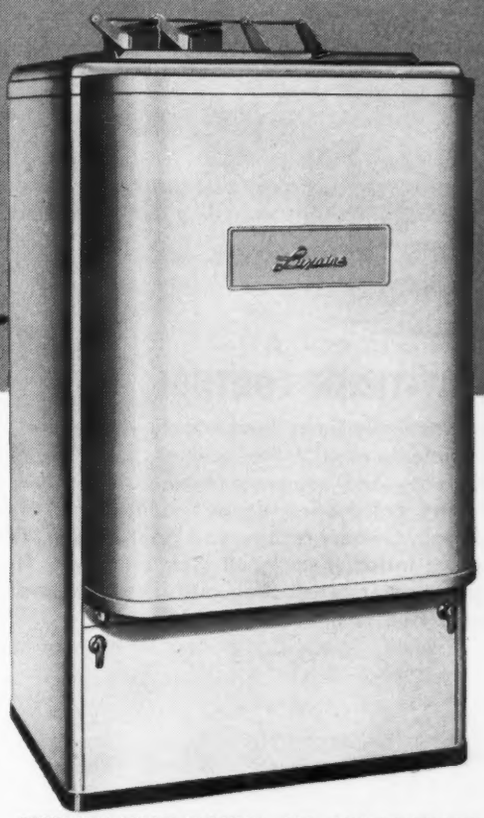
DOUBLE DUTY Mor-Sun airconditioners, designed for residential central cooling or commercial floor installations, are intended to complement Mor-Sun's warm air furnaces in size, appearance and performance. Airconditioners are available in 2 and 3 ton capacities. Both sizes require only 24⅜" by 22" of floor space; each is 60¾" high. They have hermetically sealed units using Freon as the refrigerant and are equipped with a 15" by 24" replaceable air filter. City or well water may be used to cool the refrigerant, with or without a cooling tower.



The airconditioners provide a wide variety of heating- cooling combinations, since they can

The NEW Luxaire® YEAR 'ROUND AIR CONDITIONER

It COOLS in Summer and HEATS in Winter



It's One Complete Unit— For Heating—For Cooling— Housed Inside a Single Cabinet

. . . It's unusually compact, requires less installation space than most standard heating units!

. . . Can be safely installed with the 2 sides and back of cabinet close to walls or partitions. Everything accessible from front of cabinet.

. . . It's factory assembled and wired. It's only necessary to slide the assembled cooling unit into the cabinet and make the necessary water and electric connections.

. . . It's priced to meet competition.

Builders are looking for a complete unit for new houses. Take advantage of this new Luxaire unit . . . Sell them what they want. See your Luxaire jobber TODAY.

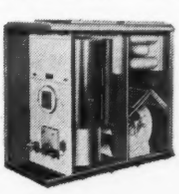
LUXAIRE YEAR 'ROUND AIR CONDITIONERS ARE APPROVED TO BURN EITHER GAS or OIL!

2 Ton Cooling with Heating Input 100,000 B.T.U. Gas . . . 105,000 B.T.U. Oil

3 Ton Cooling with Heating Input 140,000 B.T.U. Gas . . . 165,000 B.T.U. Oil

HEATING AND AIR CONDITIONING UNITS FOR ALL TYPES AND SIZES ON INSTALLATIONS

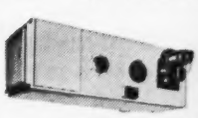
Basement Air Conditioning Units



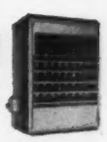
Counter-flow Units

Utility Units

Gravity Furnaces



Horizontal Furnaces



Gas Unit Heaters 4 Sizes

APPROVED FOR EITHER GAS or OIL with EQUAL EFFICIENCY

THE Luxaire® C. A. OLSEN MANUFACTURING COMPANY • • ELYRIA, OHIO

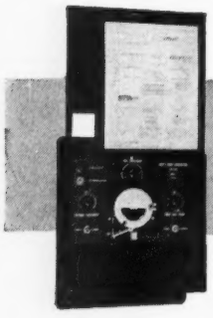
HEATING & AIR CONDITIONING UNITS

fueloil & oilheat

Make Customers and Influence Profits with HEAT-TIMER

guaranteed controls and valves

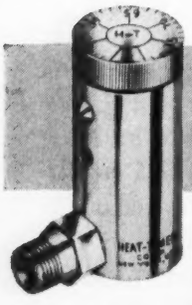
They have no competition



The Heat-Timer Control takes the guesswork out of heating installations

HEAT-TIMER CONTROL

automatically times heat supply to weather, makes possible up to 40% fuel savings; has other important efficiency and economy features. No other control **at any price** offers equal benefits. Installations sell for you. Owners recommend Heat-Timers; managing agents install them in all their buildings. You build for customer satisfaction and increased profits with every Heat-Timer Control that's sold.



Heat-Timer Valves take the "bugs" out of hard-to-balance 1-pipe steam systems

precision-made; long-life; brass, chromeplated.

HEAT-TIMER THERMOVALVE **automatically maintains accurate temperatures, room by room.** Has built-in dial thermostat. Does not interfere with existing controls. Angle or straight shank. **List $3.95**

HEAT-TIMER VARIVALVE **gets heat fast to those hard-to-heat rooms, mains and risers.** Venting orifice, variable 0" to 5/16". Angle or straight shank. **List $3.45**

HEAT-TIMER CORP'N

657 Broadway, New York 12, AL 4-5380

Mfrs. of HEAT-TIMER Electronic Controls, Thermovalves, Varivalves, Motorized Valves; Smoke-Eye Smoke Alarm; Fire-Chief Fire Alarm and other outstanding products.

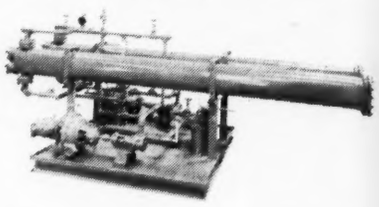
be installed as mated units with any Mor-Sun furnace or as individual cooling units, duct-connected to any make of furnace.

Made by: Morrison Steel Products, Inc., 601 Amherst St., Buffalo 7, N. Y.

Ask for more information about A14

Eagan packaged Sets for heavy fueloil Preheating, Pumping

PACKAGED pump and heater sets for heavy fueloil have been developed by Walter H. Eagan Co. A complete line of units includes models that preheat residual oil up to 300° F., pump up to 400 psi at capacities up to 3,000 gph. Inlet sizes vary from 1½" to 5", depending upon the size of the set; discharge outlets range from 1" to 3".



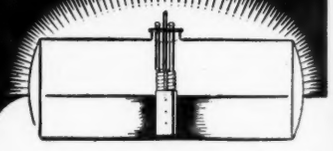
Shipped ready to operate, single or duplex units are available for steam or electric drive. Duplex "electro-steam" sets also can be furnished and have an electric motor driven pump and a steam pump for stand-by service.

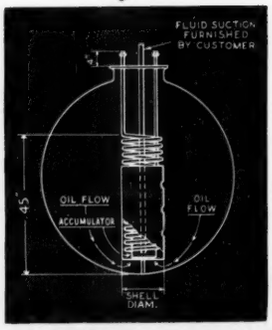
Made by: Walter H. Eagan Co., Inc., 2336 Fairmount Ave., Philadelphia 30, Pa.

Ask for more information about A15

Solve **STORAGE TANK OIL PREHEATING**

REMPE "Hot Spot" PREHEATER





All-steel shell and coil assembly for preheating No. 5 and Bunker "C" oils and other liquids to proper flow temperature before they enter the suction pipe. Positive preheating by flow accumulator.

Suction pipe, inlet and outlet pipes for heating by steam or hot water go through manhole cover. Made with 14" or 16" dia. shell.

WRITE FOR DETAILS

Complete facilities for fabrication of pipe coils—all types—all materials. Engineering service. Send details for price.

HEAT TRANSFER EQUIPMENT REMPE CO. Founded 1890

REMPE COMPANY

336 N. Sacramento Blvd., Chicago 12, Ill.

Keep TABS on WIRING PERFORMANCE with—

CHESTER
plasticord-plasticote
WIRES & CABLES

Tested and
Approved
Beyond
Specification

Chester ENGINEERED plastic insulation, laboratory and field tested to more than meet specifications, provides both easier working qualities and longer service life. These rugged plastic coatings offer maximum immunity to abrasion, weather, oil and most chemicals. Smooth and pliable, they pull through conduit easily.

OIL BURNER IGNITION CABLE

THERMOSTAT CABLES

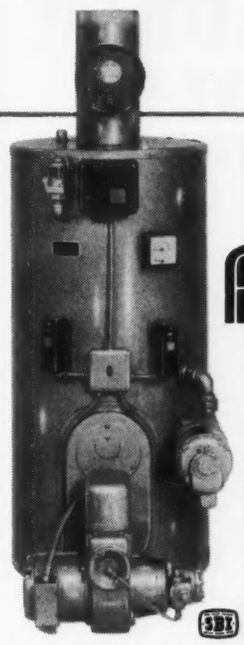
TW BUILDING WIRES

INSTRUMENT WIRE

"Chesty" HAS THE ANSWERS — Plasticord and Plasticote wires are available in standard constructions or custom built to specifications. For a practical solution to unusual insulated wiring problems, call or write.

CHESTER CABLE CORP
CHESTER, NEW YORK

Please Your Home Buyers and **SAVE MONEY!**



GULF STREAM PACKAGE
Fully erected, pre-wired, accessory-equipped. Ready to set in place and connect. Easy to install and service.

Install Thrifty

ALDRICH BOILER BURNERS

A Size and Price For Every Need

■ Aldrich gives you 7 sizes and ratings in its standard line, plus 5 compact smaller sizes of the popular GULF STREAM.

The GULF STREAM is designed for space saving and economy in heating the small home, with a choice of oil or gas-fired units. When equipped with coil, the GULF STREAM provides instant domestic hot water supply—both heat and hot water from a single unit and a single fuel.

Extra rugged, simple to install and service, the GULF STREAM is priced to meet competition. More and more builders choose it. Write for detailed literature.

Five sizes, SBI ratings 440 to 1120 sq. ft. water radiation • Multiple flue tubes baffled for maximum heat extraction • Aldrich burners coordinated to Gulf Stream boilers • Easy maintenance—quickly removable top jacket, large opening to combustion chamber • Minimum temperature change regardless of firing conditions • Meets ASME code • Burners U. L. listed.

SERIES "B" STANDARD — 7 SIZES
From 100,000 to 808,000 BTU per hour. Fully erected with automatic controls.

HOT WATER HEATER
Internally galvanized, high delivery. Outputs from 100 to 850 GPH at 100° rise. For household and commercial needs.

ALDRICH COMPANY
135 Williams St., Wyoming, Illinois

ALDRICH HEAT-PAK PRODUCTS
BREEZE MARK

A SUBSIDIARY OF BREEZE CORPORATIONS, INC.

AVOID *Cut Throat*
COMPETITION IN CONVERSIONS
and REPLACEMENTS

only
SILENT KORTH
has the **EXCLUSIVE**
CAT-COMB SPIRALATOR
MONITOR HEAD
ASSEMBLY

- EASIER TO SELL
- BIGGER PROFITS
- SIMPLE EXTERNAL ADJUSTMENT
- NO SPECIAL PARTS

MODEL SRC
(available in 2 sizes)
.75 to 3.0 G.P.H.

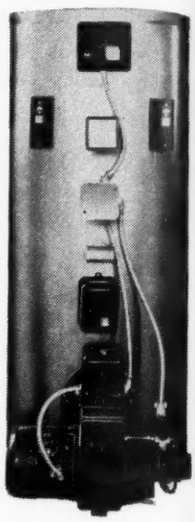
It's sales dynamite—more profitable, easier to sell, service-free! The Cat-Comb Spiralator Monitor Head Assembly is designed exclusively for and available only with Silent Korth Model SRC! This scientifically designed head results in air breakup where it counts—at the point of atomization—for greater combustion efficiency. Every installation leads to recommendation business.

WRITE FOR FULL DETAILS

ECKHART MFG. CO., INC.
UNION, NEW JERSEY

Beth-Pak is upright boiler Unit designed for small home Market

BETH-PAK is a completely assembled boiler-burner unit fired with a Bethlehem Crusader gun type oilburner. The boiler is constructed in accordance with ASME specifications and has a gross output of 117,000 Btu/hr, net 79,000 Btu/hr, making it suitable for a home requiring 400 sq. ft. of standing radiation. The unit is equipped with an instantaneous water heater.



It is shipped with safety combustion, operating and high limit controls, temperature and altitude gauge, pressure relief valve, relay, delayed action valve, tank heater or tankless coil, jacket and insulation. Circulator, air scoop, flow valve and thermostat also are included. Beth-Pak stands 54" high, has an outside jacket diameter of 24". The unit can be cleaned quickly and features all accessories mounted in accessible positions.

Made by: Bethlehem Foundry & Machine Co., Bethlehem, Pa.

Ask for more information about A16

❖

GET YOUR FOOT IN THE DOOR

GET THOSE
HEATING PLANT REPAIRS
NEW INSTALLATIONS

Increase Sales Contacts with the
GRAND RAPIDS FURNACE CLEANER

Yes, here's your "in" to increased business and profits! The famous Grand Rapids Furnace Cleaner not only gets you into the customers basement but gives you an excellent opportunity to check over each heating plant as it is cleaned.

The Grand Rapids Furnace Cleaner puts you right where you can naturally recommend and sell necessary repair work and new installations.

The proven sales plan "A Plan to Increase Your Sales" leads the way to profits! The right to use this manual is reserved to users of the Grand Rapids Furnace Cleaner.

Write for free information today!

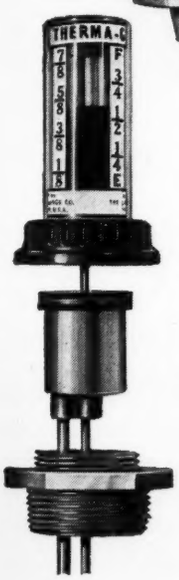
DOYLE VACUUM CLEANER CO.
233 Stevens St., S.W. Grand Rapids 7, Michigan

HERE THEY ARE...SENTRY'S TWO NEWEST ADDITIONS TO THEIR EVER-POPULAR

AT-A-GLANCE (DIRECT AND REMOTE) TANK GAUGES

THERMA-GAUGE

A superior quality, precision instrument with full view, solid red thermometer-type indicator

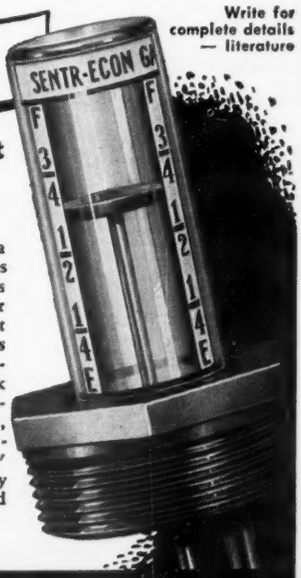


Without question, here is the easiest to read, *accurate measure* gauge on the market—And, the easiest to install, whether tank is empty, full or partially full. Unit features zinc base metal, two-piece die-cast assembly — Unbreakable red plastic assembly nut — Calibration chart, sealed between heavy, heat-resistant plastic domes—Brass rivets—And, a *double coated* cork float that's impervious to oil, many chemicals and acids. No gears, magnets, cams or tapes. Guaranteed to withstand in excess of 70 lbs. pressure per sq. inch. Tailor-made to fit individual tanks up to 12 ft. deep. Calibrated and factory adjusted.

QUICKLY, SIMPLY INSTALLED. Illus. at left shows how entire calibration and float assembly may be inserted and positioned *after* two piece die-cast tank plug has easily been installed in tank — only an ordinary wrench is needed.

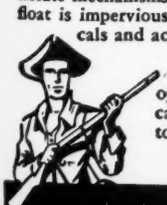
SENTR-ECON

Write for complete details — literature



A new, durable, low cost instrument for economy installations.

Exceptionally high quality for such a competitively priced gauge. Features patented *double dome* with calibrations positioned between inner tube and outer heat-resistant plastic shell. Also, die-cast tank fitting — plated metals — brass rivets. No gears, magnets, cams or intricate mechanisms. *Double coated* cork float is impervious to oils, most chemicals and acids. Simple to install, even in partially-filled tanks. 1½" openings only. Factory calibrated and adjusted to insure accuracy.

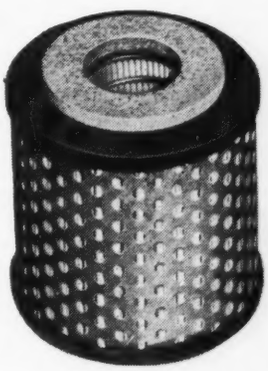


KRUEGER *Sentry* GAUGES

GREEN BAY • WISCONSIN

Good news for you— and your customers!

Anti-spilling depressed cover ... over 200 sq. ins. of filtering surface . . . stops dirt down to .0002 in. . . . more than 100 g.p.h. gravity flow capacity . . . 7,000 gal. per year dirt-retention life.



Purolator Filter Refills are interchangeable with other popular filters.

...the new PurOlator micronic* Oil Burner Fuel Filter

√Fewer service calls for you!

√More dependable heat for your customers!

Made by the makers of famous Purolator* Micronic Automotive Filters—standard on America's quality cars—this new oil burner filter brings you installation and service advantages that put it at the top of its class!

Write for specifications and name of your nearest supplier.

*Reg. U.S. Pat. Off.

PUROLATOR PRODUCTS, INC.
Rahway, New Jersey and Toronto, Ontario, Canada
Factory Branch Offices: Chicago, Detroit, Los Angeles

PUROLATOR
WORLD'S FINEST OIL FILTER

Warm Air Convention highlight new Homes

(*Begins on page 24*)

covers 90% of total housing costs in the year and that remodeling of old homes is only 10%. Explaining the trend to larger new homes he showed that 65% of those built in 1953 had three bedrooms and that there is a noticeable demand appearing for the four bedroom house . . . 88% of all present new homes are of the one story type.

Haeger went on to say that 80% of the new homes built in 1953 used warm air heating, that 61% of these were heated with gas fuel and 31% with oil. This, of course, refers to the speculative builder type of new home where the low cost of gas equipment makes it economically attractive. He believes that we will get another million new houses in 1954, or in other words virtually the same as 1953.

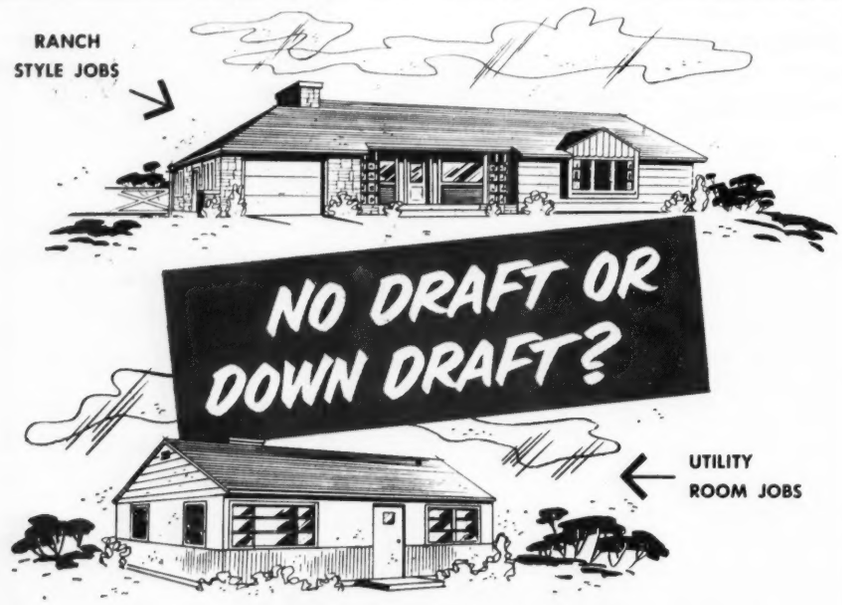
E. C. Price, of *American Artisan*, Chicago, brought some data taken from the 1950 census after eliminating the non-private residence from the overall dwelling unit figures. Price estimated in 1950 the nation had 12,015,000 single residences with central heating plants. Of these he estimated that 8,302,000 had warm air heating and 3,713,000 had steam or hot water heating. He pointed out that in the ten year period between the 1940 and 1950 census the number of warm air heated homes had grown 60% while number of boiler heated homes had grown 33%. Price further estimated that in 1950 the nation had 15,472,000 single homes without central heating. This was up 5% in ten years while the centrally heated homes were up 52% in that period. Price went on to estimate that among the warm air heated homes 46% burn coal, 37% burn gas and 17% burn oil. Among the boiler heated homes 39% burn oil, 39% coal and 22% gas.

Cities to suffer

Speaking on the home modernization market H. O. Chamberlain, of Minneapolis - Honeywell Regulator Company, had quite a bit to say about how cities are being blighted through the better families and industries moving out to the suburbs or country and he expressed the opinion that the only solution is to reverse this flight. He feels that to solve the tax problem we must get taxpaying population back into the cities. Chamberlain believes that 90% of present old homes can be successfully modernized and that only 10% need to be scrapped.

He mentioned that some builders are buying and modernizing old homes and making a much higher percentage of profit than is possible with new home developments. Chamberlain believes that cities themselves must modernize their streets, parks, schools and other public facilities to make the towns more attractive. What the industry needs, he believes, is a new FHA modernization type of loan to run a maximum of ten years with a small down payment and small interest up to $5,000. He surprised the audience by stating that the present interest rate on FHA three year Title I loans is 9.7%.

H. T. Gilkey and D. R. Bahnfleth, both of the University of Illinois, made presentations of charts and explana-



try **HART Supra-Flame** (HCM-SF)

ABSOLUTELY GUARANTEED TO CURE PULSATIONS!

(ON 0.65 TO 1.65 GPH INCLUSIVE)

1. Guaranteed to cure pulsations.
2. Silent operation.
3. No "cut and try" adjustments — head welded in as part of draft tube and nozzle assembly.
4. CO_2 readings 10.5 to 12.5% without smokiness.

HART gives you all this with NO TRICK VENTING . . . COMBUSTION CHAMBER SEALED TIGHT!

Difficult low, zero, or down draft jobs in ranch-type homes or other "problem" homes lick themselves when you use the new HCM model HART Oil Burner with the Supra-Flame Head. Pulsationless burning is guaranteed! *

***MONEY-BACK GUARANTEE**
(to experienced, bonafide oil burner men)

Order a HART Supra-Flame Burner. Install it on your toughest pulsating job and poorest draft conditions. If, within 60 days, you are not completely satisfied in every way with the HART Supra-Flame Burner, we'll take it back and *refund price of burner, no questions asked!*

"HOME IS WHERE THE HART IS"

HART HEAT

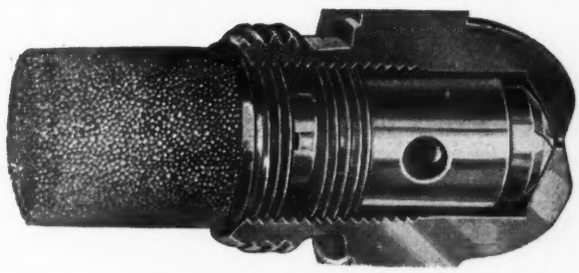
Division of Avery Farm Machinery Co.
2006 S. Washington
Peoria, Ill.
Phone 4-9271

ORDER NOW. PHONE COLLECT, TELEGRAPH OR WRITE ON LETTERHEAD

Monarch

OIL BURNER ACCESSORIES

F-80 OIL BURNER NOZZLES



1. Every Tip individually tested for Spray Angle and Capacity —your guarantee of uniformity.
2. Self-Centering internal assembly always produces a balanced spray—No lopsided fires.
3. Micro-Finish of Tip and Disc seats plus extremely close manufacturing tolerances insure accurate capacity control.
4. Will handle any domestic oils currently being supplied in the United States or Canada.
5. Tip, Disc and Locknut are made of a High Chrome Stainless Steel for maximum heat and wear resistance.
6. Five different series available for producing various spray characteristics — all developed through hundreds of *fire tests* in both Laboratory and Field work.

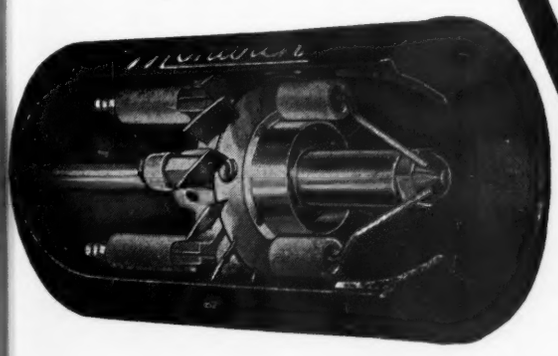
AIR MIXING EQUIPMENT

CONVENTIONAL:

Bladed Cone Rings and four blade Stabilizers for ordinary replacement for Air Tubes from 3½" to 8" Inside Diameter. Also special "Anti-Pulsation" equipment.

COMBUSTION HEADS:

Latest G-81 Head illustrated is as easy to install as an ordinary Air Cone and Stabilizer. No "adjustments" to get out of order and high CO_2. For either 3⅞" or 4" I.D. Air Tubes.



Write for Catalog "O"

FLAME MIRRORS

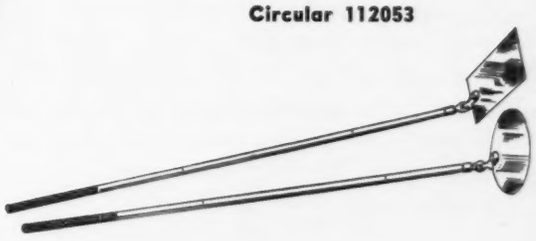
Until you can see the flame you can't tell whether or not a burner is firing properly!

With a Monarch Flame Mirror you *can* see to check that the flame is balanced, the electrodes properly located, and that there is no flame impingement on the firebox or air cone.

Features:

1. Least expensive mirror on the market. Extra mirrors alone cost approximately ¼ price of complete unit.
2. Highly polished chrome finish mirror can be quickly interchanged or replaced by removing a single set screw.
3. Swivel joint assembly of Brass Nickel plated. Two handle end sections of Aluminum.

Circular 112053



DEALERS: BUY FROM YOUR MONARCH JOBBER

MONARCH MANUFACTURING WORKS, INC.

2503 E. Ontario St. **Philadelphia 34, Penna.**

Canadian Sales Agents (Except B. C.): Canadian General Filters, Ltd., 2679 Danforth Ave., Toronto 13, Ontario
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tions of research work they are doing for the Institute at the present time. The principal emphasis in each instance was on summer cooling. Particularly interesting was a study of a cooling installation in a home with a concrete slab floor where cold air was circulated through six inch warm air pipes imbedded in the concrete.

This house has 750 sq. ft. of floor space and is cheaply constructed without insulation or other expensive heat saving facilities. It was satisfactorily cooled with a two-ton unit. During the test period of the month of July, with 31 days, in which the temperature exceeded 90° on 11 days, the cooling cost for the month was $20.80. Of this $13.92 was for electricity at 2½ per kw and $6.96 was for water at 37¢ per 100 cubic feet. This cost was based on continuous operation of the blower. When the blower was cycled with the cooling unit the electric cost dropped to $11.95 and the water cost remained the same.

When the blower was operated continuously the compressor was set at half capacity or 12,000 Btu per hour and the thermostat was held successfully at 75°.

It was significant, both in the papers on this subject and in the floor discussion, that there is a lot more to be learned about cooling than is generally known today. For example, it was pointed out from the audience that these tests were run in an empty house without occupants and that the introduction of a family with its cooking and perhaps careless habits in leaving doors open would make it much more difficult to figure the load. The University men recognized this situation but pointed out that it was necessary first to understand better the basic principles before going into the many possible variations in future studies.

New officers elected at the convention were C. B. Phillips, Surface Combustion Corporation, President, G. W. Denges, Williamson Heater Company, first Vice President, and Frank L. Meyer, Meyer Furnace Company, second Vice President.

George Boeddener, Secretary-Treasurer and Managing Director was re-elected for the 15th year.

Oil-O-Matic Negotiates Sale of Company to Henney

AT A MEETING in New York early in December the directors of the Eureka-Williams Corp. announced approval of the sale of the facilities of the company to Henney Motors of Freeport, Ill. The proposal has been approved by stockholders, who met in Detroit, Mich., on December 23. The main factory is in Bloomington, Ill.

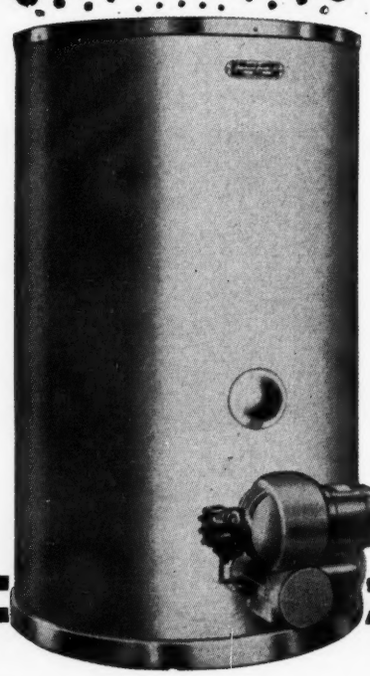
C. Russell Feldmann is president and principal stockholder of Henney Motors, manufacturers of ambulances, hearses and other motor vehicles for special uses.

Involved are the sale of all Eureka-Williams manufacturing facilities, including oilburners, vacuum cleaners, airconditioning equipment, garbage disposal units and defense items, and approximately all of the company's assets.

Present indications are that there will be no change in the operating characteristics of Eureka-Williams nor its line of products.

You'll Like.....
...THE QUICK PICK-UP IN....
Profits in the Small Home Market with...

SHEPHARD PERCOLATING ACTION BOILERS



Yes, PROFITS are intensely interesting these days, particularly when they come from prestige building merchandise . . . through a market that is growing daily. Yes, SHEPHARD Domestic Boilers and Hot Water Heaters (incorporating the Percolating Action) have become a standard in profits, efficiency and economy. This well known action prevents lime, scale and sediment from collecting . . . keeps boiler continuously clean . . . thus preserving the life and efficiency of the heating unit. Sturdily constructed for long-lasting dependability. Completely arc welded from boiler plate and tubes. Thoroughly galvanized inside and out. Furnished with any desired color (blue is standard) with chromium trim.

Boilers have 2" wool insulation. WRITE FOR FURTHER DETAILS.

Shephard HEATER CO. INC.

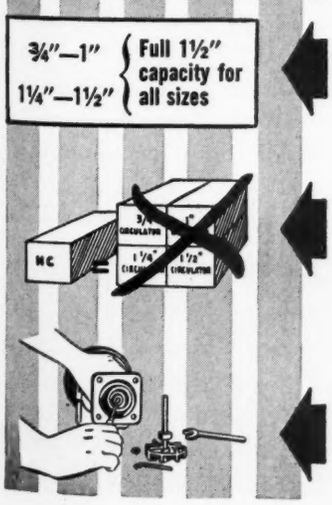
951 SYCAMORE AVE., TERRE HAUTE, IND.

for LOW COST SERVICE

Buy Taco

Ruggedly Built CIRCULATORS

SAVES YOU MONEY THREE WAYS:



EXTRA CAPACITY

Taco circulators have that extra capacity needed for today's modern small pipe radiant heating jobs (panels, convectors, radiators or baseboards).

LESS AND MORE FLEXIBLE INVENTORY

Interchangeable flanges mean one circular plus four sets of flanges (¾", 1", 1¼" or 1½") equals four sizes of circulators in stock.

A CINCH TO SERVICE

All you need is an open end wrench, screw driver and allen set screw wrench.

Get more information today about Taco's increasingly popular circulators. New users are enthusiastic because Taco is the BIG-VALUE of our industry.

Better Heating—Better with Taco

Taco

TACO HEATERS, Incorporated
137 South St. • Providence 3, R. I.

fuel oil & oil heat

Everyday Snags

(*Begins on page* 101)

"I don't want one boiler overloaded and overworked while it carries the whole water heating load in winter plus half of the heating load," the owner objected, "while the other boiler takes it easy handling just half of the heating load."

"The boiler fitted with the tankless coil actually will carry no more load than the other boiler," the dealer said.

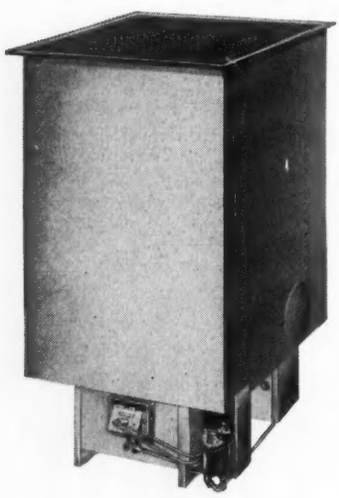
"First," the burner dealer said, "both boilers will be fired at precisely the same rate—I'm figuring on 30 gph for each boiler. With both burners running, the Btu input of each boiler will be precisely the same. The boilers and their efficiencies are identical, so the Btu output of each boiler will be the same. With no hot water being drawn, each boiler handles half the radiation load.

"When at 5:30 PM to 7:30 PM the water heating load is at its maximum, the boiler fitted with the big tankless coil naturally is cooled considerably by the coil, and this reduces its steam output. But its Btu input is the same as it was before, and its total heat output is the same. Now its heat output consists of (1) hot water for faucets, and (2) steam for radiators, but in smaller amounts than the boiler would provide if it were not providing hot water for 85 families.

"Naturally," the burner dealer went on, "there's less steam for the radiators at times of peak hot-water load than at other times. Using a tankless arrangement of any type, that's the case if you've got one boiler, or two to six boilers working together, to produce heat and hot water. Using your two boilers, the heating system gets less steam when the water heating load is great. Then the boiler that doesn't heat water might provide 60% of the steam that flows to the radiators, while the other boiler provides 40% of the steam that flows to the radiators."

The dealer managed to prove his point to the apartment house owner. If you fire two boilers at the same rate, you can't have a greater Btu load on one than on the other!

Only H.C. Little Oil Floor Furnaces have these 3 sales-making advantages!



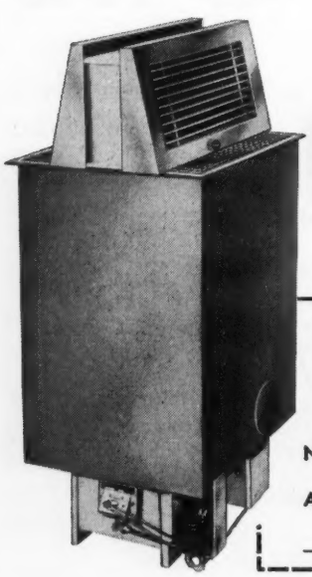
H. C. Little Automatic, Electric Ignition Oil Floor Furnaces:
Standard Register, 50,000 and 75,000 BTU Output. Dual Register, 55,000 and 80,000 BTU Output.

1 **The only floor furnaces** with a vaporizing burner listed by the Underwriters' Laboratories for #2 oil!

2 **Electric power failure can't cripple** these automatic, electric ignition furnaces! They can be operated by hand during power failure, to maintain heat when it's really needed!

3 **Revolutionary new H. C. Little Air-Jet ignitor** gives efficient, dependable service even under adverse conditions, such as poor draft, leaky valves or low voltage!

These three sales-making advantages can be making sales for *YOU!*



25th Anniversary H.C. Little Burner Co. Inc.

H.C. Little Burner Company, Inc.

Head Office: San Rafael, Calif. Distributors in 18 Principal Cities

WRITE FOR COMPLETE PROFIT-MAKING FACTS TODAY

H. C. Little Burner Co., Inc.
San Rafael, California Dept. F-1

Send profit making facts on your OIL FLOOR FURNACES to:

Name_____

Address_____

_____

Keep Heater in oil Tank off when pump Set is idle

AN IDEA that proved new and exceptionally interesting to commercial-industrial burner dealers appeared on p. 117 of the May, 1953 issue of FUEL-OIL & OIL HEAT. Letters from dealers are still coming in as the result. The idea is to equip the suction bell of a big No. 6 oil job with an electric heating element—8,000 watt in the case described—and to control this automatically using a remote control that has a long capillary tube and a liquid-filled bulb located in the suction bell. A setting of 120°F. may be good for the control. The article that explained the idea, written by Jean L. Dupuis, included a drawing of the entire arrangement.

Many of the big-burner dealers who wrote in about this fueloil heating arrangement had questions on their minds about safety. It's been pointed out to several of these dealers that, with a pump set on the job to circulate hot No. 6 oil, safety can be increased by wiring the suction-bell electric heater so that it can be on only when cur-

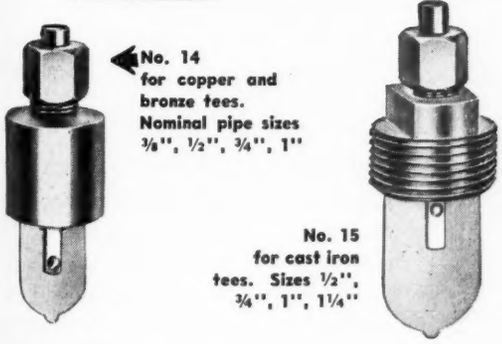
Now...for the first time!

MAID-O'-MIST ADAPTER UNITS

for converting standard tees into BALANCING VALVES

Phantom view above shows a No. 14 one-inch Adapter Unit inserted in a copper tee ready for balancing. Brass butterfly is adjustable to compensate for any difference in the height of the tee sleeve.

Maid-O'-Mist offers you a low cost unit for making up your own balancing valves. They are designed for the job of balancing hot water heating systems . . . easy to install . . . and priced much lower than square head cocks or other types of shut-off valves. These Adapter Units are quickly soldered or sweat fitted into regular copper or bronze tees or threaded into cast iron tees. Inserted in side outlet of tee of the same pipe size to complete an efficient Balancing Valve for all types of forced circulation and hot water heating systems. Simple balancing adjustment requires only a screwdriver. Precision made of brass and monel metals with packed stem construction.

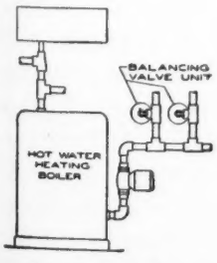


No. 14 for copper and bronze tees. Nominal pipe sizes ⅜", ½", ¾", 1"

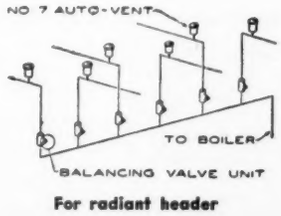
No. 15 for cast iron tees. Sizes ½", ¾", 1", 1¼"

FULL FREE FLOW OF WATER THROUGH THE TEE

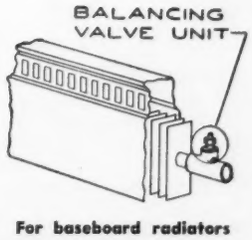
Since there is no inside reduction of pipe diameter, there is no water restriction except for the balancing required. This advantage plus low cost permits the use of additional balancing in a hot water system without preliminary planning. The line drawings shown below illustrate positions on various heating systems where additional balancing can be used to advantage. Maid-O'-Mist Adapter Units are available in the sizes shown at left.



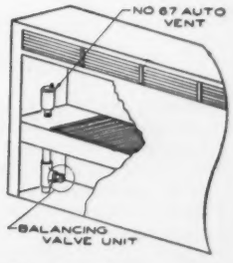
For return header



For radiant header



For baseboard radiators



For convector radiators

Prices and details from your jobber, or write direct to

MAID-O'-MIST Inc.
HEATING SPECIALTIES

AUTOMATIC HUMIDIFIERS . . . . . AUTO-VENTS
WATER LINE CONTROLS . HEATING SPECIALTIES

MAID-O'-MIST, Inc.

3217 NORTH PULASKI ROAD . CHICAGO 41, ILL.

rent is flowing to the motor that drives the pump set; if the oil pump is turned off, the heater can't be on. Going one step further makes certain that if the pump is running but is not moving oil because it is air-bound, the suction-bell electric heater won't be turned on. To gain that safety feature, install a pressure control at the output side of the pump set, set it so that its switch will be closed only when the pump set is running and is providing proper oil pressure, and wire it so that when "off" it keeps the suction-bell electric heater turned off. If he wants to give the suction bell a shot of electric heat for a few minutes with the pump set idle, a serviceman easily can do something like shunting the pressure control temporarily or wedging its switch "on."

The questions about safety, in the letters from the burner dealers, included worries about what would happen if the suction-bell electric heater started to work full-blast while no oil was being pumped—perhaps due to complete failure of the one thermostatic control used to turn it on and off. The methods described above, and other methods related to pump pressure or vacuum and to giving current to the motor that drives the oil pump that takes oil from the suction bell, can be used to provide safety to almost any desired degree.

Can You Afford To Throw Away This Profit?

Super Red Streak Model SH—For both wet and dry, hot and cold cleaning. May be equipped with Supertex Filter Bag at slight extra cost. Note that Supertex bag is standard compact size, not over-size.

Big business-building opportunities can be yours by investing in a Super Model SH Red Streak Furnace Cleaner. The Super cleans all types of heating plants easily and quickly from the basement up. Anyone can operate a Super.

Increase your business, beat competitors to sales opportunities for repairs, improvements, and parts, new installations, conversions.

Let us tell you how to set up a profit-making business. Write for the FREE SUPER SALES PLAN BOOK. Ask your supplies dealer.

Non-Clog Filter Bag

Supertex filter bag is made of special porous fabric with high resistance to clogging, destructive action of acids, etc. Film formed in bag by these elements breaks and falls, leaving bag pores open, fabric undamaged. Slight extra charge.

FREE
Super Sales Plan Book
It's easy to build a profitable furnace cleaning business. This book tells you how. Your wholesaler can give you complete information on the Super Red Streak Model SH or ask us.

Super cleaners are approved by Underwriters' Laboratories and Canadian Standards.

NATIONAL SUPER SERVICE CO., INC.
1951 N. 12th St., Toledo 2, Ohio
In Canada: Plant Maintenance Equipment Co. Toronto, Montreal, Vancouver

"Once Over Does It"
SUPER SUCTION®
SINCE 1911
"THE DRAFT HORSE OF POWER SUCTION CLEANERS"

Discussion of pressure Test for new oil Lines

A DEALER who's been installing big burners for many years was outraged recently because he could obtain contracts to install seven industrial burners only by agreeing to make the suction-line air-pressure tests specified by a consulting engineer.

"Cap ends of completed suction lines," the specification reads, "With no fueloil in lines, put 100 lbs. air pressure on them. If in 24 hours the pressure in the lines exceeds 90 lbs., the lines pass this test."

The dealer who's outraged because of this specification was asked if he was certain all his suction lines were air-tight. Where such a test was not to be made, would his lines be tight enough to pass such a test?

His answer: "Certainly! All my suction lines are as air-tight as electric light bulbs, and no pressure tests are needed to prove this!"

Asked about all this, an architect who provides pressure-test requirements in all his specifications for commercial-industrial burner jobs had this to say, "On installations where the pressure tests were made under careful supervision, I've never wound up with suction-line air leaks and resultant burner trouble, sometimes with great expense to the owners to finally end the air leaks. On installations where I did not specify air pressure tests, and where I specified them but could not get around to enforce my requirements, all too often I've run into great trouble and expense as the result of air leaks in suction lines."

This architect believes that burner dealers should pressure-test all their suction lines without being required to do so, because that's the only way to insure air-tight lines and proper burner operation.

Comment from editor of EVERYDAY SNAGS *department: Two-stage pumps*

A WHOLE NEW MARKET FOR YOU— with KLEER-KLEEN's New Perimeter Furnace!

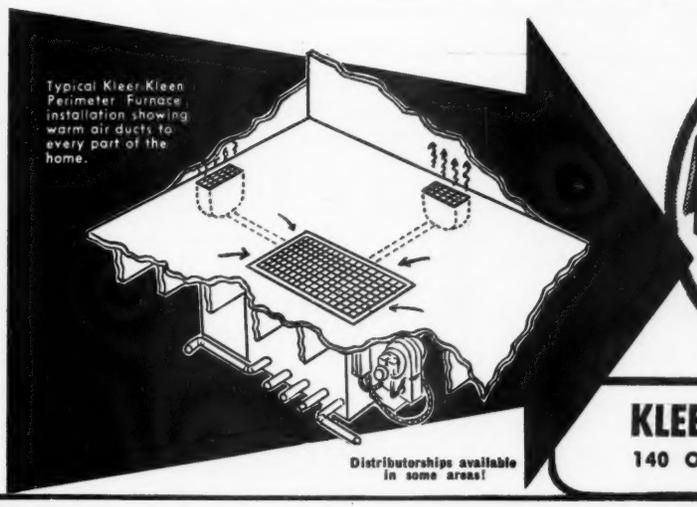
Yes, **KLEER-KLEEN** opens up a whole new market for you!

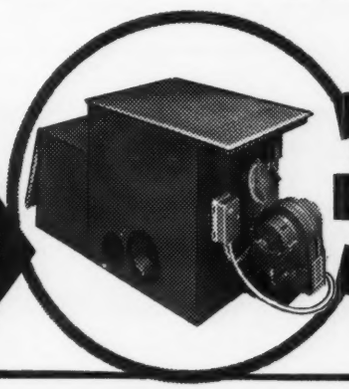
Now dealers can take advantage of a new style heating for the American Home—the **KLEER-KLEEN** Perimeter Furnace with central heating—built in! This pressure burner equipped furnace looks like a floor furnace—but is exactly the opposite! The top grill is a cold air return while the bottom half of the furnace is the warm air heating chamber.

KLEER-KLEEN's Perimeter Furnace—the most revolutionary, yet practical furnace made! For extra profit sell this KLEER-KLEEN engineering and sales triumph!

- Central cold air return built into furnace.
- Cool air blown for summer cooling.
- LAU 10 in. squirrel cage blower.
- No down payment—up to 3 years to pay.
- Furnace can be completely installed for as little as $20 per month.
- Fits same opening as your present floor furnace.
- Every furnace equipped with dependable Pressure Burner.
- As many as 12 warm air runs connected to all parts of the home.
- Burns inexpensive #2 fuel oil.
- Up to 100,000 Btu/hr.

ALL KLEER-KLEEN Pressure Burners are Listed and Labeled by Underwriters' Laboratories, Inc.—an added measure of safety and protection!


Typical Kleer-Kleen Perimeter Furnace installation showing warm air ducts to every part of the home.
Distributorships available in some areas!



NO ADDITIONAL SPACE

NO EXPENSIVE DUCTWORK

NO EXPENSIVE INSTALLATION

KLEER-KLEEN MANUFACTURING CO.
140 ORCHARD AVENUE • HAYWARD, CALIFORNIA

Attention—Oil Burner Men!

"THE PROPER NOZZLE"

Is A New Important Reference Manual You Can Use Immediately

If you want the RIGHT nozzle for a particular burner, there need be no guess work, just refer to "The Proper Nozzle" Reference Manual and you have it in a few seconds.

"THE PROPER NOZZLE" Reference Manual is the result of many years of research, and its data compiled from thousands of practical nozzle application tests and installations.

HERE IS A REFERENCE MANUAL YOU NEED EVERY DAY. Actually, you can save several times its cost with only one nozzle installation.

MORE THAN ONE HUNDRED BURNERS LISTED

"The Proper Nozzle" Reference Manual will be off the press on or before January 15th, 1954. Reserve your copy or copies in advance.

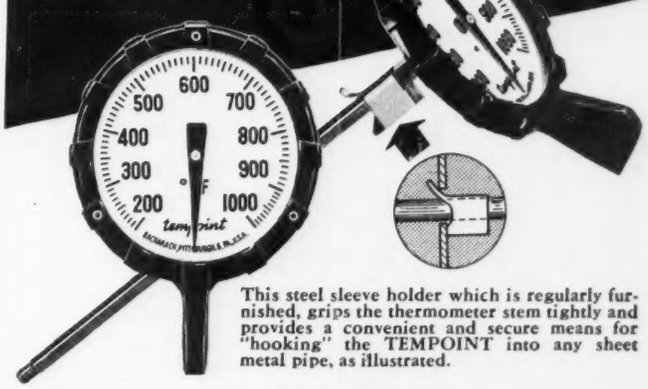
Only $6.00 per copy.

Write or Wire to:

HEAT CONTROL ASSOCIATES
Combustion Engineers & Consultants
1018 Commonwealth Avenue, Boston 15, Mass.

A FLUE GAS THERMOMETER

Designed Specifically For **HEATING MEN**



This steel sleeve holder which is regularly furnished, grips the thermometer stem tightly and provides a convenient and secure means for "hooking" the TEMPOINT into any sheet metal pipe, as illustrated.

Temperature indications of this precision bi-metal thermometer are as fast as those of the usual mercury thermometer, but this instrument is not subject to the many breakage hazards of ordinary thermometers. With reasonable care it will retain its guaranteed accuracy of within 1% of its range indefinitely. The three-inch diameter face, with large numerals and clear graduations together with the red V-shaped pointer make the TEMPOINT exceptionally easy to read, even in dimly lit locations.

This is one of a complete line of heating test instruments. Ask your jobber about the TEMPOINT or write for Leaflet 775.

BACHARACH INDUSTRIAL INSTRUMENT CO.
7301 PENN AVENUE — PITTSBURGH 8, PA.

on pump-equipped burners help greatly on jobs having slight leaks in suction lines, but unfortunately fail to end trouble where the leaks are so great the primary pumps receive three-quarters air and one-quarter fueloil. Even installing burners equipped with two-stage pumps, it's best to aim to install suction lines that are absolutely free of air leaks.

Put Pressure on tankless Coil suspected of leaking

THE EQUIPMENT in this boiler room was complicated because one, big, new boiler was carrying the entire load, but five, old, small boilers were still piped up. The old boilers were ready for use in case the new boiler broke down.

When the waterline of the new boiler rose every day, questions came up about water entering the system through defective valves in the make-up lines to the five old boilers, or water entering the new boiler directly as the result of a pinhole or other leak in its tankless water heater.

"What to do?" asked the superintendent in charge of the boiler room. "This trouble can be awfully complicated, considering all the equipment, piping, and valves it involves."

He received and followed these instructions. First, install a pressure gage on the tankless water heating coil that might be leaking. Read the city water pressure on the gage with the coil in use. Then turn off dead-tight a valve on the input side of the tankless coil, and a valve on the output side. The gage continues to read the pressure in the coil. If the reading of the gage drops promptly, either (a) the coil is leaking, or (b) one of the valves you turned off is failing to close dead-tight.

Second, if the reading on the gage drops, you've got to find out if a defective valve caused the drop, for if a defective valve did not cause the drop then the tankless coil is leaking. Eliminate the valves by removing them and using pipe caps or pipe plugs to isolate the tankless coil. That is, disconnect the input piping and the output piping from the tankless coil. Fit it with the pressure gage, and with a fitting that permits you to apply a tire pump to it. Pump up 100 lbs. pressure, if you can. If you can't, or if any pressure you pump up drops off quickly, you've found the trouble. The tankless coil is leaking.

It all boils down to find out whether or not the tankless coil can hold any pressure you put in it.

Coal needs big hot-water Rads; Oilfiring does not

AT AN EQUIPMENT SHOW, a man obviously new to the heating industry drew a catalogue out of his pocket and showed it to an attendant of a booth full of boilers.

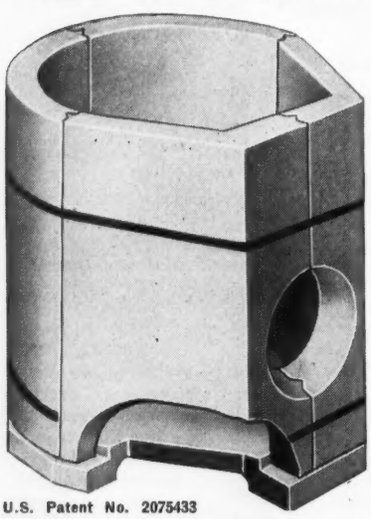
The visitor pointed out that a certain boiler, listed in the catalogue, seemed to be able to handle 1,000 sq. ft. of standing steam radiation or 1,600 sq. ft. of standing hot-water radiation. Complaining, the show visitor said he'd installed the very boiler to heat a four-family house. It failed to carry the load. Questions from the booth attendant brought out that a man from a plumbing and heating supply house had figured the radiator sizes for the system, which was closed type with basement expansion tank, and included

LITE·CAST
COMBUSTION CHAMBERS
QUICK HEAT LONG LIFE

PEAR
ROUND
SQUARE
MODERN

Monogram

HAS 137 STANDARD
DESIGNS AND SIZES OF LITE·CAST
INSULATING REFRACTORY COMBUSTION
CHAMBERS FOR . . .
ALL BOILERS & FURNACES



TONGUE & GROOVE JOINTS
HIGHER SIDE WALLS
DOUBLE SEAL BETWEEN FLOOR AND WALLS
PRE-CAST FLOOR
AIR SPACE BENEATH FLOOR

4 SHAPES
25 SIZES
.75 to 12 G.P.H.

CLOSE TO ONE HALF MILLION INSTALLATIONS

COMPLETE PACKAGE INCLUDES: Combustion Chamber, Back Fill and Steel Bands.

U.S. Patent No. 2075433

STANDARD FOR 20 YEARS

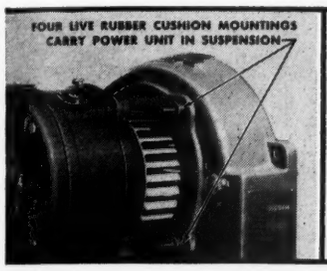
MONOGRAM PRODUCTS CO., INC.
731 NORTH 35TH STREET • PHILADELPHIA 4, PENNA.

"OLD ROCKING CHAIR 'S GOT ME" — Beckett Commodore Oil Burners.

Today . . .
ROCKING CHAIR COMFORT has become the by-word of service men who know Beckett COMMODORE oil burners. Engineering foresight eliminates inconvenience and tedious adjustments. Note the time saving features below.

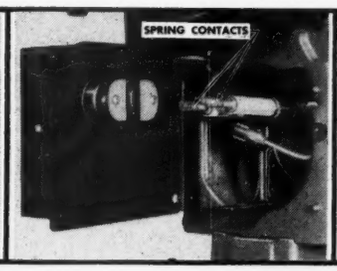
Different!
22 U. S. and Canadian Patents.

ALL VITAL PARTS ACCESSIBLE FROM BACK OF BURNER



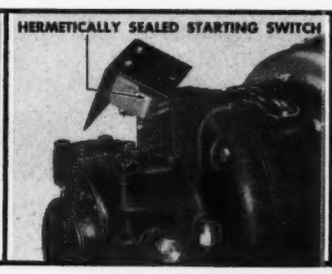
The Power-Unit is removable as a single unit from the rear.

NOTE: All moving parts suspended in rubber prevent metal to metal contact and sound transmission.



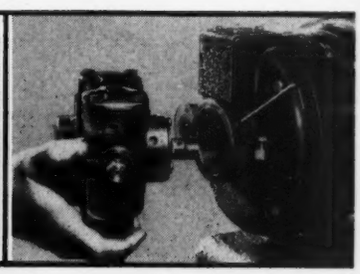
Convenient access to nozzle-electrode assembly.

NOTE: No ignition cable. Spring contacts automatically make connection when transformer is closed.



Sealed Starting Switch at top of motor.

NOTE: Remove only one screw for access to motor switch . . . not necessary to remove motor or Fuel-Unit.



Fuel-Unit easily removable from rear of burner by loosening 2 set screws.

NOTE: All parts are conveniently located and cannot be assembled in misalignment.

R. W. BECKETT CORPORATION, ELYRIA, OHIO

SQUARE-LINE Base Radiation

Snap-on Installation
Stock or Custom Lengths
Copper-Aluminum Fin
Flush-Recessed
Single or Double Fin
Neat & Economical

Also:
HOFF CONVECTORS - -
Stock or Custom Sizes
Free-Standing
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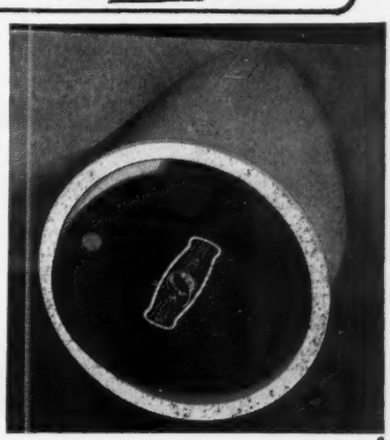
I give my customers the BEST!



BOSTON-STANDARD
DRAFT CONTROL

The World's Most Accurate DRAFT CONTROL

Ordinary chimney drafts fluctuate from .02 to .25 inches or more, due to varying winds, atmospheric conditions and temperature changes. A draft control should compensate for all of these changes and hold a *constant* pull on the heating unit correct for that particular heater. Without a good draft control, every variation in the chimney draft causes a change in CO_2 reading, resulting in increased cost of operation.

The BOSTON-STANDARD DRAFT CONTROL with its patented CENTER-MOUNTED GATE, will hold the proper draft on the heating unit *constant*.

Write for complete details

BOSTON MACHINE WORKS COMPANY
Oil Heating Supplies Division, Manufacturers, Lynn, Mass.

a circulator and an oilburner. Following that and knowing the total standing radiation load was less than 1,600 sq. ft., the show visitor had selected the boiler, from the catalogue in his hand, to carry this load.

The doings in the booth for the next 15 minutes were painful to observe. The booth attendant tried with poor success to get across the point that the supply house man must have figured the radiation on a basis of 20% greater size than steam size—for he knew this would be a modern, closed, forced-circulation, hot-water system—whereas the catalogue was in terms of old-fashioned hot-water radiation, 60% larger than steam size. The irate installer of the boiler had one big point to make: You should not publish figures that indicate a boiler can handle 1,600 sq. ft. of standing hot-water radiation, when the boiler can't do this.

Many boiler manufacturers still are publishing literature that confuses in this way. They should publish ratings in this fashion: A boiler that can handle 1,000 sq. ft. of steam radiation can handle 1,200 sq. ft. of forced-hot water radiation (20% over steam size), or 1,600 sq. ft. of old-style hot-water radiation (figured 60% larger than steam radiation).

Oilfiring for close Control

Coal firing calls for big hot water radiators, mainly because it does not provide close control over maximum boiler temperatures. As you never want the water in a hot-water boiler to boil or steam, with coal firing you intend the maximum boiler temperature to be about 160°F. Even then, at times the fire will get out of hand and raise the boiler temperature to 180°F. or so, you figure. Poor attention and runaway fires relate to this.

With oilfiring, on the other hand, if you set a boiler temperature control to stop the burner at 200°F., you can feel certain that this will be the maximum boiler temperature. You've got close, dependable control. You don't need the safety margin you need for hand-fired coal.

The pressure in the boiler of a modeern, closed hot-water system is higher than the pressure in the boiler of an old system fitted with an open expansion tank. This higher boiler pressure permits use of somewhat higher boiler temperatures and radiator temperatures. The radiators of closed systems can be somewhat smaller therefore than the radiators of open systems.

Forced circulation helps. It rushes the water from the boiler to the radiators, then through the rads, decreasing the temperature drop throughout the system. At a given boiler temperature, the radiators are hotter because of forced circulation than they would be with old-style gravity circulation.

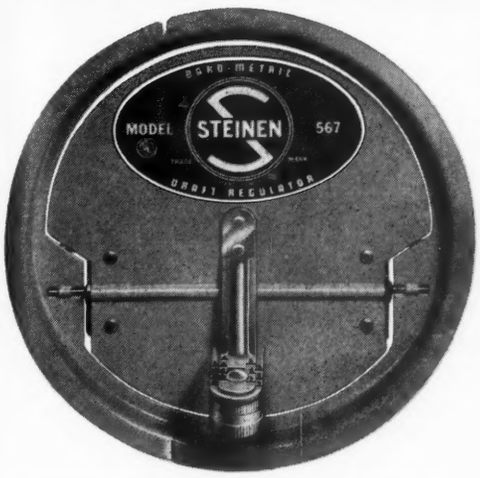
For excellent reasons which many heating experts do not fully appreciate, modern oilfired heating plants need much smaller radiators than heating plants intended for hand-fired coal.

Furnace Improvements and ultra-clean Basements

SPECKS of soot in basements are an earmark of the use of fueloil, say the proponents of a competitive fuel in a certain city.

SAVE TIME—MONEY 5 WAYS

with Steinen Draft Regulators



- *Scaled for FAST—EASY—ACCURATE draft setting.*
- *True balance at all draft settings—*
  Front and rear weights move at same time
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  Non-clog, non-bind bearings
- *Exclusive leveling feature*
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Rotary Atomizing Burners

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Boiler-Burner Units

400 to 730 Sq. Ft. EDR Steam

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Pressure Atomizing Burners

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Boiler-Burner Units

200 to 2000 Sq. Ft. EDR Steam

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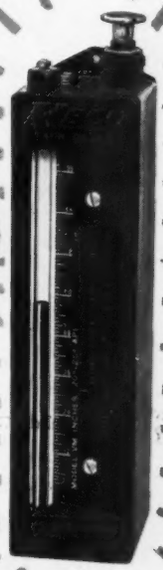
For Oil and Gasoline



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A CLEANER, HOTTER FIRE
NO ADJUSTMENTS

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INCREASES TEMPERATURE UP TO 200°

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. . . . Everyday Snags

After acknowledging this to be true on a certain important installation, an oil company owner eliminated it, he reports to us, and succeeded in warding off a switch in fuels.

First, he replaced the job's dillapidated firebox with a firebox of excellent design—the correct size with exceptionally high side walls—and constructed of insulating firebrick.

Second, thanks to his efforts, for the first time the good features of the burner's firing head and air-handling parts were put to use. They had to be used, it developed, to get acceptable readings from combustion testing instruments.

Third, air leaks and gas leaks around the furnace's flame observation door and flue clean-out doors were eliminated. One door and frame had to be taken to a machine shop for machining.

Fourth, a delayed-opening solenoid valve was installed in the nozzle line of the burner, for it's certain this improvement decreases the amount of soot formed on starting and stopping.

"Effort was 100% successful," says the oil company owner, "and to my way of thinking we'll have to do great amounts of work along these lines. Up to now, we just haven't been providing the excellent oilheating we could have provided!"

New Dongan Line of Replacement Transformers and Interchangeable Bases

•

Enables replacements to be made on close to 1,000 different models of oil burners.

•

Write for catalog

Dongan Electric Manufacturing Co.
2981 Franklin Detroit 7, Mich.

"The Dongan Line Since 1909"

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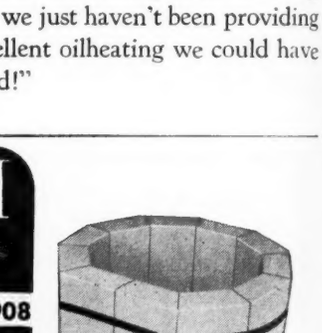
SINCE 1908
COMBUSTION CHAMBERS



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GEM Combustion Chambers are die formed from hi-grade lightweight insulating materials and then kiln-fired to withstand 2600° F temperatures . . . that's why they're "tough" and give years of "flawless" performance. GEM's construction guarantees high combustion efficiency and excellent performance with high or low pressure burners.

The universal design of GEM Chambers enables fast and easy installations in any boiler or furnace. The scientific "float packaging" used assures maximum protection from breakage. Enjoy GEM's many advantages on your jobs—Write Today!

Special designs to meet furnace and boiler manufacturers specifications are our specialty. Inquiries are invited for prompt free estimates.

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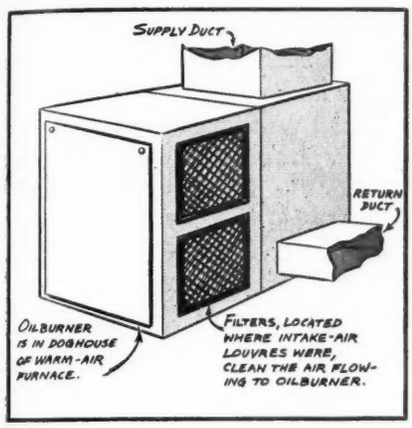
Mfg's. of RADIANTS • BACKWALLS • STOVE LINERS
COMBUSTION CHAMBERS • INSULATING BRICK • ELEMENTS

Again, filter the Air entering burner Enclosure

THE IDEA of filtering the air entering the burner enclosure of a furnace or boiler, given some months ago in FUEL-OIL & OIL HEAT, has aroused such interest that it is shown here again.


SUPPLY DUCT
RETURN DUCT
OILBURNER IS IN DOGHOUSE OF WARM-AIR FURNACE.
FILTERS, LOCATED WHERE INTAKE-AIR LOUVRES WERE, CLEAN THE AIR FLOWING TO OILBURNER.

Simply remove from an oil-designed furnace or boiler the panel that has the openings through which air flows into the burner compartment. Substitute air filters so that the air flowing to the burner must pass through them. Or leave the panel with the air openings in place, and a few inches from it, on the inside of the burner compartment, install a filter rack and air filters. After entering the jacket through the usual air openings, the air will be filtered on its way to the burner.

Objective is, of course, to keep clean-as-new the blower wheel and air-handling parts in the gun tube of the burner—especially certain well-known firing heads which have become noted for their tendency to give trouble because of plugging with dog hair, fuzz, lint, etc. from the air in a basement or utility room. Get data from the manufacturer of the air filters you use, to make certain of using suitable filters and of applying them to best advantage.

Patient Owner learns to wait for Stack to chill

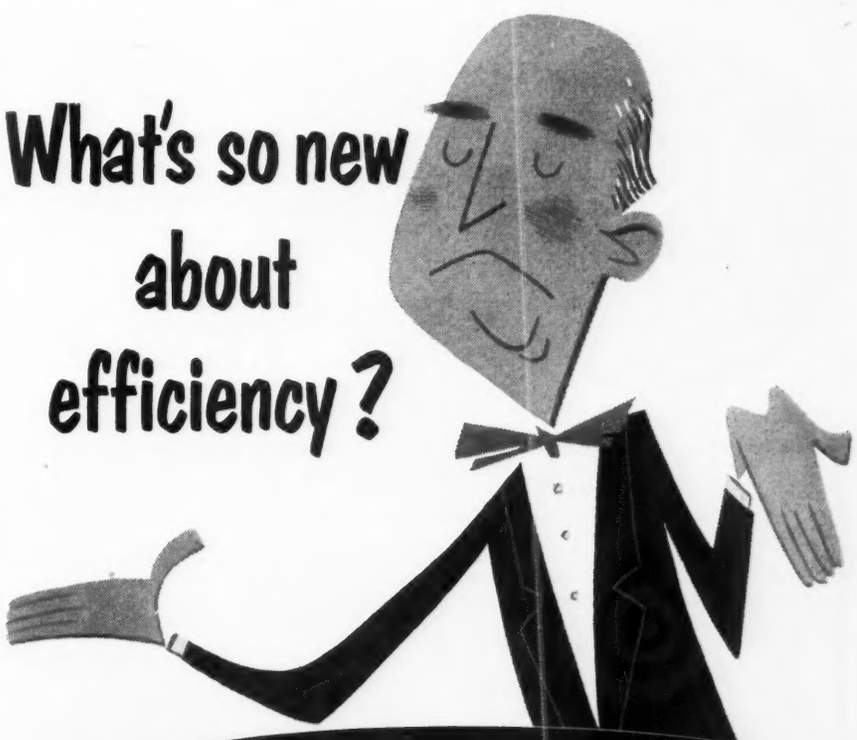
TOO BAD, but this is about a job that soots its stack control every three or four months. In the interests of the good reputation of the oilheating industry, there shouldn't be such jobs!

Anyhow, to save the home owner the expense of frequent service calls, the serviceman who reports this tells us, he taught the home owner to remove his stack control from the smokepipe, wipe off its heat-sensitive element, then replace the control.

He was pleased not to hear from his customer in two years, following this. Chancing to meet him in a gas station, he asked if everything was all right.

"Fine," the burner owner answered, "except for one thing. Every so often after I take out the stack control and clean it, the burner won't run for half a day or so, and we're out of hot water that long. Then the burner starts by itself."

The serviceman instantly reasoned out why. On this job, the stack control is mounted on the smokepipe close to the boiler, which is always hot for water heating. The control cools to basement temperature, becomes cold, when the owner cleans it. Then after he puts it back into the smokepipe, heat seeping from the boiler into the smokepipe is enough to put the control in its "hot smokepipe" position. It's the kind of control that must cool off perhaps 50°F. after the burner last ran, before the burner can start up again. On this



Nowadays, everything's gotten efficient. Everybody's got a brand-new, secret ingredient—SPC power, chlorophyll, super-detergents, atomic filters.

So what's new? With Electrol's basic principles, "wonder additives" are not needed.

That's because jet combustion, ball flame, cutoff valve at nozzle, diaphragm pressure regulator and master control, and other basic Electrol principles were sound to begin with.

They've proved themselves with the first Electrol burner in 1925 which, incidentally, still operates as efficiently and economically as any on the market today.

No improvements? Sure, plenty. *Exclusives,* too. But they just accentuate Electrol's sound original design . . . make Electrol burners far superior to any on the market.

See for yourself! Write for Electrol's free catalog today!

ELECTROL BURNER MANUFACTURING CO., INC.
22 Union Ave., Rutherford, N. J.

FINEST IN OIL FIRED HEATING EQUIPMENT SINCE 1918

job, the boiler has to cool off to permit the burner to start after the owner cleans his stack control. The serviceman tried to explain to the owner how to put the "starting switch" of the stack control in its "cold smokepipe" position after he had the control out of the smokepipe.

After listening for a minute or two, the owner said, "Don't bother. I may do something wrong and make trouble. I'll keep on doing what I've been doing right along. It's gotten so I've learned to wait a few hours for the burner to start."

Names

(*Begins on page 6*)

Wallace R. Persons has been elected president and a director of the Emerson Electric Manufacturing Co., St. Louis. He has been vice-president and general sales manager of the Lincoln Electric Co., of Cleveland for the last seven years.

E. R. Glauber has been named national sales manager for airconditioning by Emerson Radio and Phonograph Corp., New York. He will continue as director of Emerson Distributing companies. Before joining Emerson, Glauber had been vice-president and general manager of Admiral's New York Distributing Division.

K. E. DeRosay is now manager of the newly-created Fuel Oil Department of Sun Oil Co., Philadelphia, Pa. He headed the Fuel and Furnace Oil sales when the department was part of the General Wholesale Department which is now managed by Allan J. Welliver. DeRosay joined Sun Oil Co. in 1930 as a fueloil engineer. Before joining Sun he was with E. I. Dupont Co.

W. C. McCord, president of United States Radiator Corp., was elected national treasurer of Freedoms Foundation. He continues as a director of the organization.

Alfred C. Drouillard has been named manager of furnace development of the Jackson and Church Co., Saginaw, Mich. He will be responsible for further development and modification of the Jackson and Church furnaces.

Massachusetts Gas & Electric Light Supply Co., Boston, has been named distributor of window and console room airconditioners by Remington Corp., Auburn, N. Y. The territory includes eastern Massachusetts, New Hampshire and southern Maine.

R. C. Schneider Co., Wauwatosa, Wisc., named Wisconsin representative for Maid-O'-Mist, Inc., Chicago, Ill.

Standard Distributors, Hartford, Conn., named wholesale distributor in Connecticut for Chrysler Airtemp, Dayton, Ohio, heating and airconditioning products, excepting room air conditioners.

Parker H. Devlin will represent the Aldrich Co., Wyoming, Ill., in Connecticut and western Massachusetts; *Walter A. Gustafson* in Maine, New Hampshire and Vermont; and *J. L. McArdle* in Rhode Island and eastern Massachusetts.

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IMMEDIATE DELIVERY
anywhere in the U.S.A.
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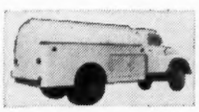
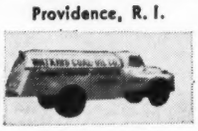
TOP VALUE
in completely* packaged 1954
FUEL OIL TRUCKS!

1050 Gallon — 1½ ton Dodge with 7:50x20 8 ply tires; complete $4,078.
1350 Gallon — 2 ton Dodge with 8:25x20 10 ply tires; complete $4,488.
1500 Gallon "Special" Dodge; V8 engine; 133 h.p.; complete .... $4,773.
1600 Gallon — 2½ ton Dodge with 9:00x20, 10 ply tires; complete $5,286.
1750 Gallon — 2½ ton Dodge with 9:00x20, 10 ply tires and 19,000 lb. G.V.W. chassis; complete .... $5,478.

Providence, R. I.

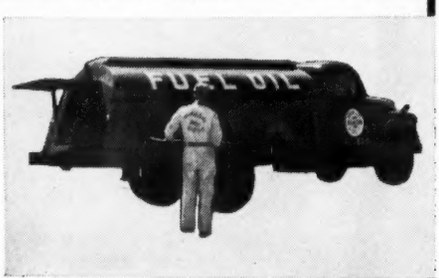

Philadelphia, Pa.


Rochester, N. Y.

Richmond, Ind.

2100 Gallon — 3 ton Dodge with 10:00x20, 12 ply tires; complete ..... $6,882.
2500 Gallon—3½ ton Dodge with 11:00x20, 12 ply tires; 100% air brakes; comp. $7,916.
3300 Gallon — 4 ton Dodge; specifications on request; complete ..... $11,890.

All base prices include 2 compartments, full skirting, top shrouding, electric or "Fluid Drive" reel, 125 feet of 1¼" hose. Rear or side installed equipment and variations in basic specifications available in all sizes. Other tank sizes and prices on request. Consideration given to state and local requirements.



*Includes chassis, tank, pumping and metering equipment

All prices above include Fed. Tax. Tank prices on other make chassis and trailer prices with specifications on request.

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Domestic Units 80,000 To 450,000 B.T.U.—Industrial 400,000 To 2,000,000 B.T.U.

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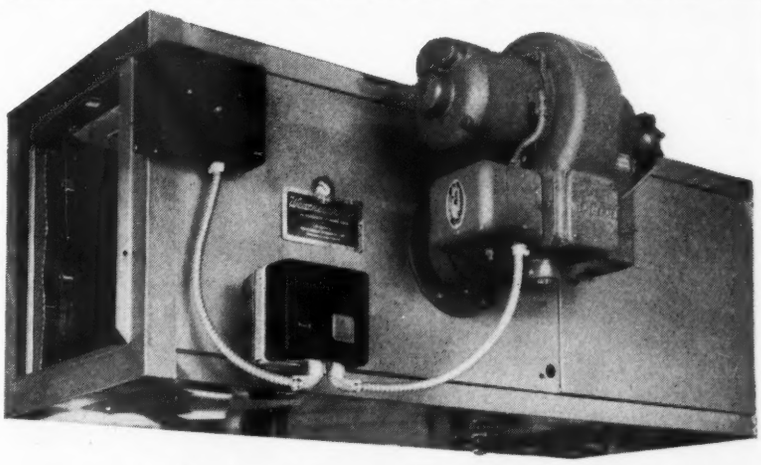

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Steel Boiler-Burner Units—3 Pass Horizontal or Single Pass Vertical

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A Quick Tight Connection For Fuel Oil Delivery

PREVENTS DANGEROUS PRESSURE

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Indispensable with VENTALARM Signal

SPEEDS UP VENTING, safe fill tapered nozzle plug is especially developed for use with VENT-ALARM Signals, it allows pumping speed to be stepped up.

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TIGHT CONNECTION eliminates excess air to be sucked in through fill pipe while tank is being filled.

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SAFE FILL tapered nozzle plug is the only approved and patented tight connection on the market — it has a safety valve that pops off at approximately 5 lbs. P.S.I. prevents rupturing oil tank.

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SAVES TIME & LABOR, permits faster filling, drivers are able to cut down the pumping time by as much as 50%.

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P. O. Box 768, New Haven, Conn.

Only Gulf Solar Heat has

SOL-X

Amazing anti-sludging additive!
Proved best in 3 years of service

Assures:

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SOL-X assures an improved cost-profit ratio for Gulf Solar Heat dealers—minimizes service calls—boosts customer satisfaction.

SOL-X is an exclusive ingredient of the finest fuel oil money can buy.

GULF
SOLAR HEAT

Gulf Oil Corporation
Gulf Refining Company
General Offices, Pittsburgh, Pa.

Readers' Problems

Q. *I am an oilburner service expert and subscriber to* FO&OH. *I have recently taken over as engineer at a garden type apartment development using forced hot water modulated by an adjustable outdoor-controlled tempering device with a by-pass. The system is one-pipe main with one two-pipe branch system for every two apartments.*

My problem is the system has not been balanced since installation. I don't profess to know too much about balancing but I'd like to learn. Can you recommend any source of concise and accurate information as to required temp. drop between supply and return on the branches with any given water temp?

By that I mean that if, for example, with given setting of the balancing valve with 190° water and say 5° or 10° above zero outside, the drop arbitrarily is 20°. It follows that as the outside temperature rises and the supply water temp decreases, then the drop across the supply and return per apartment must also go down—but to where?

The reason for my request is that there are over 250 balancing valves to be set. The outside temperature and the temperature of the water flowing through the radiation are not going to remain constant for my benefit. Consequently I have to set the 250 balancing valves at the different radiator temperatures I encounter when I work at balancing.

What is a logical and sensible procedure to follow in balancing this job?

A. V. J., Falls Church, Va.

A. You want us to give you a table that indicates, for example, how you should balance to obtain a 20° temperature drop through the radiators for 20° outside weather, an 18° drop for 30° outside weather, and so on. On a simple, theoretical basis, such a table could be developed. Actually, too much theorizing would be involved for such a basis to be practical.

Let's face facts. Many, perhaps most, of the heating systems like yours never have been balanced. Those served by these systems are not suffering as a result. True, however, the operation of these systems could be better and the fuel costs could be lower. Hours and hours of expert work, such as you plan to do, would produce nicer heating plant operation and lower fuel bills.

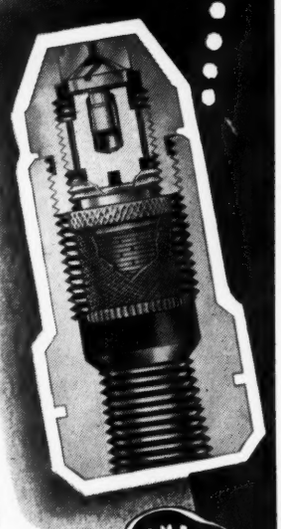
On one big job like yours, the men installing the balancing valves were ordered to set every valve 60% open. That built up a pressure difference in the system. It caused the balancing valves to meter the flow of water through each controlled section of the system. It permitted the installer to tell the superintendent of the project to adjust a balancing valve to be farther open—if he faced the need to

To Prevent Nozzle Clogging, Install
DELAVAN NOZZLES
with Hally Filters Attached...

This nozzle-filter combination has won the praise and respect of thousands of servicemen.

With openings only one-fourth to one-third as large as those in ordinary wire screen strainers, the Hally Filter makes it impossible for foreign particles in oil ever to reach the nozzle slots or orifice.

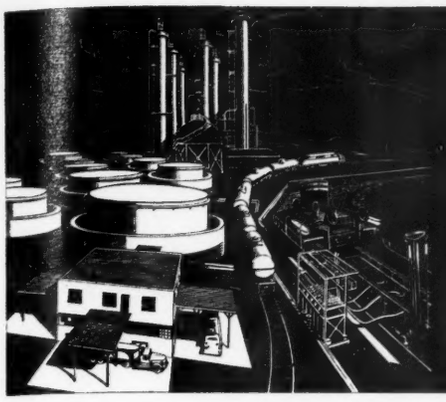
A new DELAVAN nozzle, with Hally Filter attached, practically eliminates labor wasting call-backs caused by carbon or clogged nozzles.



MEMBER OHI OIL HEAT INSTITUTE OF AMERICA

Write for Catalog 148A

DELAVAN Manufacturing Co.
GRAND AVENUE AND FOURTH STREET
WEST DES MOINES, IOWA



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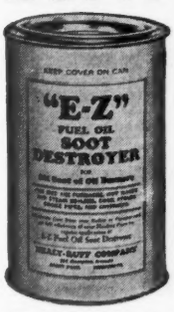
Soot Destroyer



(For fuel oil soot only.) Keep a supply on every service truck. Sell cleaning jobs. Use E-Z. Extra profit. One application does a thorough soot cleaning job. Saves time. Sell 1-lb. cans to customers. If your distributor cannot supply you, write direct.

No. 1 Pkg. approx. 1 lb. . . . List $1.00 ea.
No. 5 Pkg. approx. 5 lbs. . . List $4.50 ea.

Special discount to Distributors on quantities.

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CHAMPION ® **Sprayon** FREON PROPELLED AEROSOL BOMB PRINCIPLE

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Plumbing and Heating Contractor's Friend

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Excellent for Painting or Touching Up

Radiators	Convectors
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For better work and profit! No mixing, no clean-up, no compressor or hose needed. Just shake the can and paint. New type can with new guaranteed non-clogging inner mechanism. Complete your jobs the modern way. Ask your jobber for Sprayon today!

Attention Representatives! Some select territories still open. Write for money making details today!

COLORS: Chrome Aluminum • Gloss White • Gloss Black • Meadow Green • Bright Red • Medium Gray • Royal Blue • Ivory • Bright Gold • Copperplate • Yellow • Clear Acrylic Plastic • Black, White and Aluminum Lacquer (Oil and Waterproof)

CHAMPION BRONZE POWDER & PAINT CO., Inc.
F 2526 W. VanBuren Chicago 12, Ill.

Sundstrand OIL BURNERS

Enthusiastic reception by the public explains the higher sales frequency of the Sundstrand all-electric oil burners. With a Sundstrand, the most modern concepts of warm air heating are realized. . . . That's not enough; with a Sundstrand, initial low-cost is matched by long-span oil burner performance.

. . . These values and the Sundstrand reputation for the finest in oil heating add up to complete customer satisfaction. Foot or bracket mounted, all Sundstrand oil burners are listed as standard by Underwriters' Laboratories . . . and meet all state and local requirements.

A leader in oil heating for 33 years.

SUNDSTRAND ENGINEERING CO., Rockford, Illinois

fuel oil & oil heat

increase the heat in any apartment or section of the buildings.

Here's a procedure which may be logical and sensible for you. Plan to balance the system for a given outside temperature that you can regard as normal winter weather. Select 40°F. weather, for example. Loosen your outside temperature-sensitive bulb, and each time you want to set some of your 250 balancing valves, put the bulb in a pail of water kept at 40° by putting into it water and enough ice cubes to do the trick. Of course, you'll need a thermometer in the pail to indicate the water is 40°. Perhaps between 35° and 45° will be close enough.

Your buying the contact pyrometer was, of course, an excellent idea. Before starting balancing, use it at a few dozen places in your buildings. You will gain ideas about whether you should aim, for example, for a temperature difference of 15° or 20°. You will gain a design basis for your balancing. Setting up the entire system on that basis will be your first step.

Step two will come later. It will include altering the temperature difference in different sections of your buildings to provide proper heating in each section—to provide, say, 72° in general in most rooms, and possibly lower or higher temperatures in certain rooms or apartments to balance the factor of pleasing occupants against the factor of minimizing the consumption of fueloil.

Don't, then, make a fetish of balancing to the n'th degree for the identical temperature drop throughout the system, for after you balance to obtain proper readings from your contact pyrometer you will have additional balancing to do—and on this final common sense balancing will depend the proper temperatures for all the rooms.

Q. In Mr. Schulz' fine article on M-H controls (see November issue, page 65, lower center column) there is mention of a large percentage of Protectorelays sent in to manufacturer as defective, but actually in A-1 operating condition.

From his ample experience possibly Mr. Schulz could favor us with an opinion about this.

I am an office employee, but interested in the burner service part of our business, and my curiosity is normal so I ask: What probably happened to the service call where another good relay replaced the good relay taken off the trouble job and sent to the shop?

If one guess is as good as another, no need to go into it further. But if there is a fairly standardized procedure of servicing which we can hand to our servicemen, in print, that would lessen this one weak point in servicing and eliminate some call-backs.

C. W. F., Media, Pa.

A. Acknowledging with thanks your complimentary letter, J. W. Schulz draws your attention to his Sparky article in the December issue of FUELOIL & OIL HEAT (Sparky lets out a blast at stupid servicemen who decide that perfectly good controls are defective).

Since you are wondering what happened on a job after a good stack control was replaced by another good stack control, you can imagine what goes on in the mind of a control manufacturer's testing engineer. After a day of

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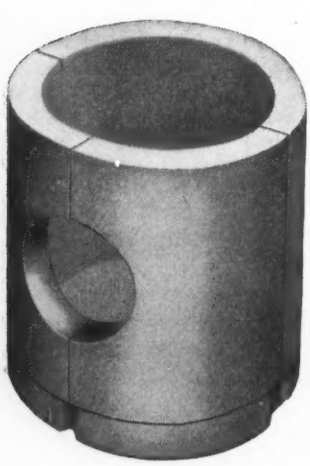

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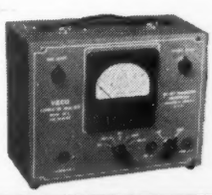

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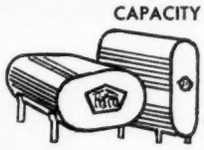

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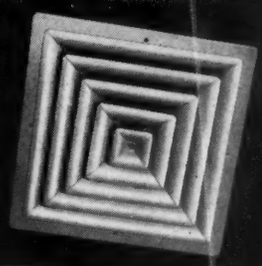

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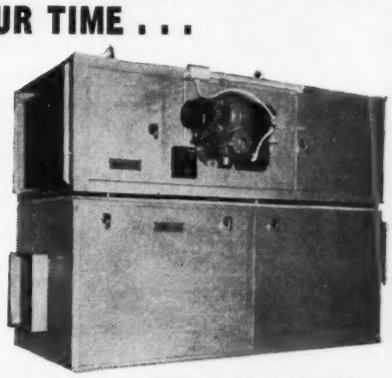

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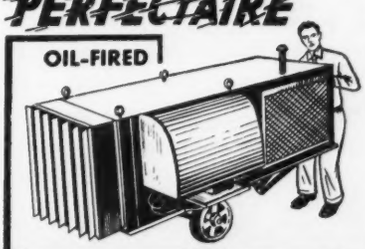

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testing 70 controls that have been returned as defective, and finding 50 of the controls perfect, the testing engineer can go wild (a) cussing out the dealers and servicemen who wrongly concluded the 50 good controls were defective, and (b) wondering just what happened on the trouble jobs after improper diagnosis of the trouble and replacement of one good stack control by another good stack control.

This happens on many, many jobs; The trouble supposed to be cured by replacing a defective stack control continues. The serviceman concludes he did the wrong thing in replacing the stack control, improves his tactics and makes greater efforts to diagnose the real trouble, and ultimately gets the job out of trouble—after, of course, many hours of wasted time.

Ignition failure

On one job involving this, the burner had been stopping "on safety" three or four times a month. After a new stack control did not end the trouble, the serviceman dug deeper into it and found that improper adjustment of the spark points of the gun burner, together with low voltage in the house at times, was causing ignition failure. Better adjustment of the spark points, made with possible low line-voltage in mind, ended the trouble for good.

Oddly, the popularity of television sets has helped. After he had replaced as defective seven stack controls in a new development of 260 homes, a serviceman learned that in all the homes the television sets were giving trouble because of extremely low line-voltage during the evenings. As that was the time his burners were stopping "on safety," he added two and two, came up with the answer that the low line-voltage also was responsible for the burner trouble.

Insufficient stack temperature within 90 seconds of the burner's starting is an often-encountered reason for a serviceman's condemning a good stack control. Certain control experts like to see a stack thermometer report a minimum smokepipe temperature of 400° F. or so within 90 seconds after the burner motor starts. That steers clear of insufficient stack temperature trouble by a proper margin, they find.

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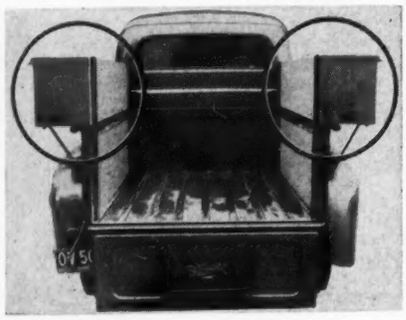

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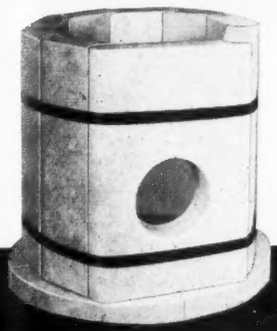

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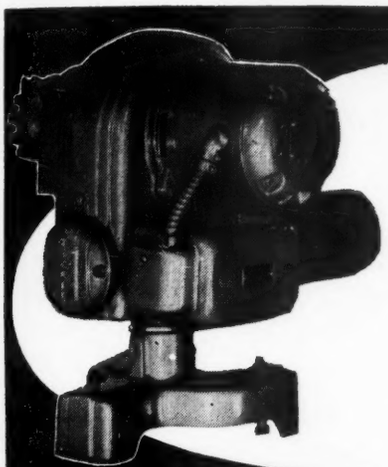

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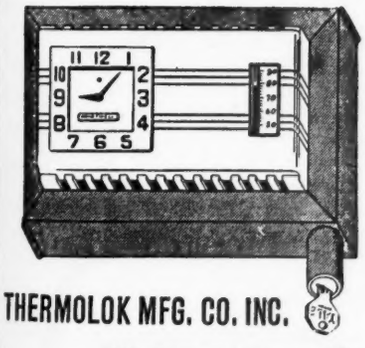

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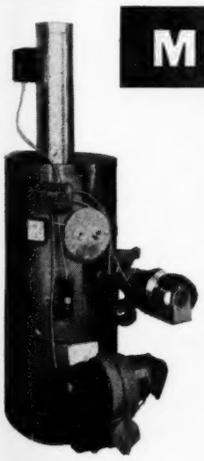

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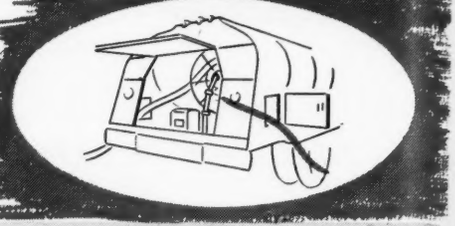

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. . . . Readers' Problems

For jobs that don't pass their test, they recommend that the stack controls be mounted in flue clean-out doors. Yet they do not want the heat-sensitive elements of the stack controls overheated, of course. They prefere a maximum reading of up to 750° F. or 800° F. from a stack thermometer located close to the sensitive element of the stack control, and object to temperatures above 900° F. or 950° F. as destructive to the heat-sensitive element.

Excessive starting and stopping of a burner can cause stopping "on safety," and improper replacement of a stack control that's in good working order. Vibration affecting the room thermostat, or a loose connection in the line-voltage or low-voltage wiring, can cause similar trouble.

Once it starts because heat is needed in the house, a burner should run for at least five minutes, according to some oilheating experts. The summer hot water "on" periods of certain jobs are shorter of necessity, but do not tend to cause "safety lock-out" trouble because they are accompanied by relatively long "off" periods.

After a burner has been idle long enough for its stack control and smokepipe to become as cool as the surrounding air, the heat-sensitive smokepipe element of the stack control will respond more rapidly to a slight increase in stack temperature. It will respond more rapidly than if it were still warm, from the time the burner last ran, when the burner started again.

Air leaks in smokepipes and around flue clean-out doors cause burner shutdowns often blamed wrongly on stack controls. So do improper locations of smokepipe draft regulators. The smokepipe element of a stack control should not be chilled by air that enters a smokepipe through a draft regulator. On the other hand, an excessive build-up of smokepipe draft that's caused by the lack of a good smokepipe draft regulator can cause lowering of stack temperature, and safety lock-outs that

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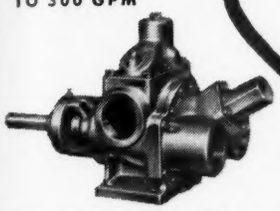

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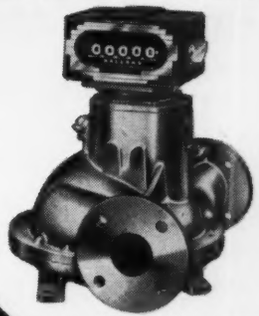

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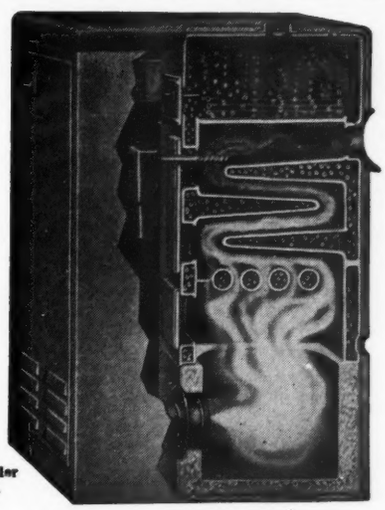

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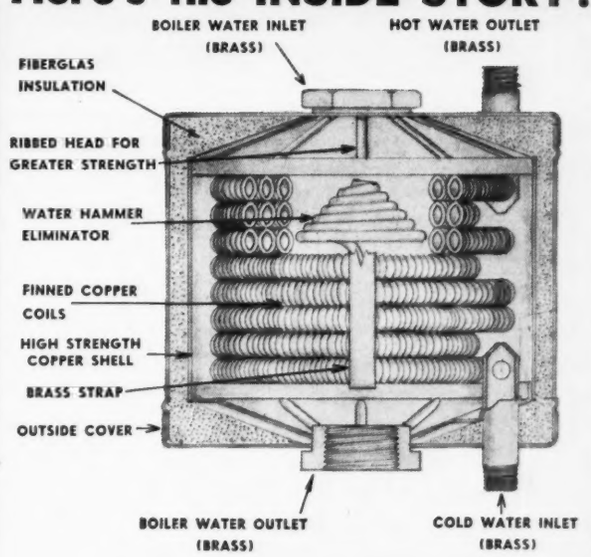

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. . . . Readers' Problems

often improperly are blamed on stack controls.

After a serviceman has made a reputation for himself for bringing back to the shop stack controls that are not defective, the boss should make him prove a stack control is defective—before it's returned to its manufacturer as defective, or sent out for outside repairs.

Use the furnace or boiler that heats your building, or use a demonstrator set-up in your showroom. Equip the test job with both a draft gage and a stack thermometer, so you know something about the conditions in the smokepipe. Have the serviceman install the allegedly defective stack control in the smokepipe and wire it to your burner—he should be able to do this in a matter of minutes. Don't permit him to declare the stack control is defective unless on the test set-up he can prove it is! We have recommended this to many dealers. It works!

Q. It would seem logical to me to use steel combustion chambers without backfill in wet-base boilers. Is this true or are there reasons why this shouldn't be done?

D. E. F., Freeport, Maine

A. You are entirely correct. We know no oilheating engineers who recommend backfill for such an installation, and many who declare that to use backfill is dead wrong. The combustion chamber arrangement you describe is similar to the one used in many furnaces and boilers designed for oil.

To top things off, certain experts are opposed to the use of backfill on any installations fitted with steel combustion chambers—including installations having ordinary furnaces designed for coal and boilers not of the wet-base type. These experts find that backfill shortens greatly the life of steel combustion chambers.

Q. I am employed by a local wholesaler and we subscribe to your magazine. I read it every month and find it very informative.

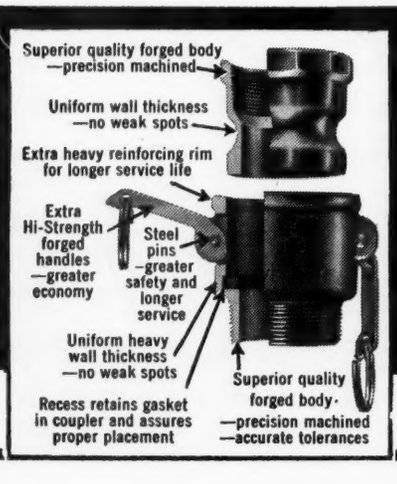
I wonder if you could help me with a problem that arises in our business. Many times we are asked by our customers to figure out what size furnace is needed for a particular job. We have to figure the exact Btu's for a forced-air oil-fired installation. Can you give us a method or recommend a good book that deals with this subject?

D. T. R., Washington, D. C.

A. Here's the "Short-Cut Rule for Figuring Heat Losses" developed some years ago by our technical editor and used widely today.

It pays to get EVER-TITE *Quality* in Quick Couplings

There's an EVER-TITE for every need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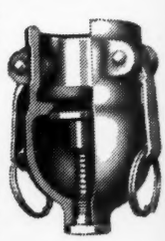
Recess retains gasket in coupler and assures proper placement
Superior quality forged body —precision machined —accurate tolerances



EVER-TITE Couplings give you a quick, tight connection every time—under every condition. They make your deliveries fast . . . safe . . . dependable. And because they are made of tough, durable bronze, they give you *more* coupling service —*less* coupling cost.

It pays to get EVER-TITE quality—the top value in quick couplings. Ask your distributor now.

EVER-TITE COUPLING CO. INC.

254 W. 54th St., New York 19, N. Y.

Picture of a Contractor Saving TIME and LABOR . . .

You can increase your profits by installing Patco Warm-Air Baseboard just like many other contractors are doing throughout the country. It's easier, cheaper, faster to install because: you simply nail baseboard to studs, snap on diffuser face; there's no fabricating time since you don't have to make dampers, transformers, cut elbows or ducts; there are no tapered ducts and many different size fittings to fuss with; inexpensive industrial downspouting in 10′ lengths can be used for the required 4″ and 5″ diameter pipe.

These are just a few of the many advantages of Patco Warm-Air Baseboard. Get *complete* details today. Write Dept. F.

PATCO AIR-BASEBOARD
THE WALL RADIATES HEAT
PATENT PENDING

PATCO MANUFACTURING CO. **231 N. Bread Street, Philadelphia 6, Pa.**

1. OUTSIDE WALLS AND COLD CEILINGS — Multiply net area by 17.5; this factor is for nine out of ten uninsulated homes of average construction. Add 20% if the house is exceptionally hard to heat. Deduct 20% if the house, although not insulated, is of exceptionally good construction which makes it very easy to heat. Some engineers deduct 50% for insulated houses, declaring their experience proves this suitable.

2. WINDOWS—Multiply single-glass area by 77; multiply double-glass areas by 49.

3. OUTSIDE DOORS—For ordinary, single doors about 1″ thick, multiply the area by 49; for unusually thick, heavy doors, multiply by 35.

4. AIR-CHANGE—For one air-change per hour, multiply volume of room (in cubic feet) by 1.4. For most rooms, figure 1.5 air changes per hour.

Square feet and cubic feet are the bases of this thumb rule, of course.

Add the four figures obtained through using the above steps, and you get the heat loss of the room or the building in Btu's per hour for 70° room temperature and zero outside temperature. Deduct 1/7th if you plan for ten above outside temperature, deduct 2/7th if you plan for twenty above outside temperature, and so on. Or similarly correct the factors of the thumb rule to match design conditions in your city.

Additional details on figuring heat losses are on pages 3 to 8 of the book, "Installing the Domestic Oilburner," which you can order from us. Priced at one dollar, this book is an easily understood, practical guide that covers hundreds of details.

Q. We installed the two-thermostat layout shown on p. 118 of your October, 1953, issue. Owner's thermostat turns oilburner on and off. Under it is a little low-voltage light bulb, giving heat to owner's thermostat when on, and turned on and off by reverse-acting thermostat located upstairs in tenant's apartment and locked at 74°.

Now the owner wants automatic reduction of temperature at night. Question: Can we install just one thermostat of clock type in his apartment, or do we need another in addition in tenant's apartment also?

F. U. B., Eau Claire, Wis.

A. Just one clock thermostat in the owner's apartment will do the trick. A clock thermostat in the tenant's apartment will not be needed. Because the bulb under the owner's thermostat will be burning at night giving the thermostat a few degrees worth of "false heat," adjust the clock thermostat for a considerable reduction in heat at night.

STOP giving away your ductwork profits!

According to a recent FUEL OIL and OIL HEAT survey, 22% of all oil heating dealers plan to add their own sheet metal shops. This makes sense because you'll have absolute control over the quality and timing of ductwork installations. You'll SAVE a big slice of PROFITS on all your warm air and summer cooling jobs. Here's how to start.

WEBCO ***The Portable Sheet Metal Bending Brake***

You can make ducts and fittings easily and quickly without hammering work. You can turn out dependable, precision work on this inexpensive top-quality sheet metal bending brake. Let us show you!

CALL OR WRITE

HALLMOR INC. — McMurray Road, Bridgeville, Pa.

THOUSANDS OF OIL HEAT DEALERS SWEAR BY GORTON VALVES

Steam jobs can only be as efficient as the venting valves used. Many inefficient steam jobs need GORTON VALVES to make all radiators heat *even* and *quickly.* If you have not used GORTON VALVES, why not try them on your next steam job? The results will amaze you and you too will then swear by GORTON VALVES.

1941 Prices of Gorton Valves Still Hold!

Write for prices and literature.

GORTON HEATING CORPORATION
Since 1887—Manufacturers of Heating Equipment
CRANFORD NEW JERSEY

Old Timers at Sid Harvey honored at December Meeting

OLD TIMERS in the Sid Harvey Companies, Valley Stream, N. Y., held a dinner-dance meeting on December 5. Sid Harvey, president, presented the new members with a silver bowl.

New members of "Faithful Old Folks" are Leslie E. Lewis, treasurer; Walter Reeves, manager of the Newark, N. J. store; Marguerite Olson, office; and Barton Lynch, manager of the Baltimore store.

OIL BURNER IGNITION ASSEMBLIES *for* industrial and residential use

CROWN offers a complete line of standard oil burner electrode assemblies, cable assemblies, hardware, terminals and UL approved cable. Quality is the finest available. Ceramic insulators are UL approved. Prompt, efficient, reliable service on all orders—large or small.

Complete Service

CROWN engineering service is complete. Call or write today for complete information on standard or custom-built assemblies. Literature on request.

Crown Engineering CORPORATION
KEYPORT • NEW JERSEY

DEGREE-DAY TABLES

ONE MONTH ONLY					SEASON TO DATE			
	November		Percent		Sept. to Nov.			Percent
Normal	1952	1953	Change*		Normal	1952	1953	Change*
780	747	681	—12.7	Albany AP	1362	1443	1229	— 9.8
387	359	347	—10.3	Atlanta CO	516	567	445	—13.8
489	457	454	— 7.1	Baltimore CO	729	729	612	—16.1
618	595	487	—21.2	Boston AP	1010	1025	835	—17.3
753	654	626	—16.9	Buffalo AP	1307	1346	1091	—16.6
765	605†	612	—20.0	Chicago AP	1205	1124†	882	—26.9
567	518	559	— 1.4	Cincinati CO	837	907	731	—12.7
636	555	530‡	—16.7	Cleveland CO	1007	1069	845‡	—16.1
299	347	314	+ 5.0	Dallas AP	358	491	368	+ 2.8
711	914	604	—15.1	Denver CO	1199	1281	947	—21.0
798	776†	665	—16.7	Des Moines AP	1251	1350†	969	—22.6
747	660	609	—18.5	Detroit AP	1224	1276	975	—20.4
756	681	615	—18.7	Grand Rapids CO	1255	1343	1013	—19.3
699	671	616	—11.9	Hartford AP	1187	1176	1022	—14.0
999	1157	785	—21.4	Helena AP	1936	1894	1477	—23.7
186	218†	162	—12.9	Houston AP	200	269†	181	—10.0
642	589	579	— 9.8	Indianapolis CO	947	1047	810	—14.5
621	605	206	—66.8	Kansas City AP	905	947	369	—59.2
144	216	97	—32.6	Los Angeles CO	205	229	115	—44.0
579	538†	552	— 4.7	Louisville AP	862	925†	753	—12.7
795	749	634	—20.3	Milwaukee CO	1304	1448	991	—24.1
960	873†	767	—20.1	Minneapolis AP	1577	1619†	1180	—25.2
141	174	125	—11.4	New Orleans CO	154	242	142	— 7.8
561	501	458	—18.4	New York CO	863	859	665	—23.0
783	777	620	—20.8	Omaha AP	1202	1282	869	—28.0
516	487	464	—10.1	Philadelphia CO	768	792	625	—18.7
612	531	534	—12.8	Pittsburgh CO	966	980	815	—15.7
825	813	708	—14.2	Portland, Me. AP	1539	1562	1395	— 9.4
534	653	420	—21.4	Portland, Ore. CO	899	828	716	—20.4
672	571†	570	—15.2	Providence AP	1160	1004†	1028	—11.4
543	517†	514	— 5.4	Roanoke, Va. AP	827	887†	707	—14.5
570	529	473	—17.0	St. Louis CO	817	854	626	—23.4
714	842	509	—28.7	Salt Lake City CO	1105	1020	808	—26.9
237	271	242	+ 2.1	San Francisco CO	476	599	453	— 4.9
1005	904	793	—21.1	Sault Ste. Marie AP	1942	1907	1611	—17.1
540	580	454	—15.9	Seattle CO	1003	900	837	—16.6
756	668	647	—14.4	Toledo AP	1245	1290	1039	—16.6
519	478†	499	— 3.9	Washington AP	793	787†	671	—15.4

*Compared with normal. †City Office ‡Airport